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THE GREAT "RETAIL WHEELING" ILLUSION -- AND MORE PRODUCTIVE ENERGY FUTURES

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I. <u>INTRODUCTION AND OVERVIEW</u>

One of our most important industries is in transition from comfortably entrenched monopoly status to largely uncharted territory, which clearly will feature much more competitive deliveries of a much wider range of services. Structures of regulation and management that dominated electric utilities for the better part of a century are giving way, and the debate over their replacements is critical from both economic and environmental perspectives.

That debate reflects some fundamental differences over the nature and future of the electricity industry. Few participants simply defend business as usual; the argument is over how best to realize the values implicit in expanded competition and choice, while overcoming some formidable environmental challenges and respecting equity concerns.

This paper has two objectives. The more important is to describe and champion utilities' ongoing evolution into highly competitive resource-portfolio managers and environmental stewards whose principal motivation is to minimize customers' energy service costs. A complementary aim is to resist an ill-founded campaign to derail that transition. Central to this campaign is a concept called "retail wheeling", which has long resisted capture in language satisfying minimum standards of intelligibility.

At base, retail wheeling is a classic exercise in disguising an appeal for special privilege as the pursuit of civic virtue.

The term itself refers to a fictional exclusive connection over a complex power grid between a particular business or household and a distant power supplier. Through systems of these fictional connections, as explained more fully below, regulators would at a stroke redefine the retail electricity business as a kind of commodity exchange, which in turn would reward suppliers who could minimize near-term unit costs of electricity while destroying incentives for many investments that could have reduced long-term energy service costs to consumers.

Prominent among the likely casualties would be costeffective energy efficiency improvements and renewable energy
generation. Yet the biggest losers might well be retail
wheeling's supposed industrial constituency, which would
sacrifice much more promising options in the very act of securing
a grossly oversold remedy for competitive ills.

This outcome, which has been analogized unpersuasively to trends in telecommunications and natural gas regulation, is neither desirable nor inevitable. Retail wheeling cannot happen without active and continuing support from state regulators; it is they and their legislators and constituents who will make this decision across the United States. No technology or historical imperative will preordain the result, which is about flows of dollars rather than electricity -- and about how utilities should be managed and motivated. Retail wheeling is not "deregulation"; it would require a huge, complex and continuing new exercise of regulatory authority.

Of course, there is always a temptation to invoke contrived historical imperatives as substitutes for the merits of a policy dispute, even as there are always brokers eager to enrich themselves by inventing new and mystifying transactions that increase commissions but not productivity or product quality. One responsibility of legislators and utility regulators is simply to see such efforts for what they are; as increasing numbers do just that by rejecting retail wheeling, the policy is losing any pretense of momentum.

This debate turns in part on key features of the retail electric utility business, including a critical distinction between the emerging reality of retail <u>competition</u> and the older fiction of retail <u>wheeling</u>. Part III below explores these issues.

The most compelling reason to reject retail wheeling is its incompatibility with the utility industry's transition toward a structure that is at once more competitive and more attuned to pressing concerns of environmental stewardship. That structure is the subject of Part IV.

It is important first, however, to recall key goals of utility regulation that must inform any evaluation of reform agendas. Part II reviews why the electric utility industry has so long been viewed so rightly as "affected with the public

interest", and what the industry's most innovative regulators have been doing to vindicate that interest.

II. A BUSINESS "AFFECTED WITH THE PUBLIC INTEREST"

At about \$187 billion in 1992, the U.S. electric bill was equivalent to three percent of the Gross National Product.²

That is hardly an inconsequential figure, but it grossly understates the importance of this industry to its customers' quality of life.

As regards sulfur dioxide, carbon dioxide, and oxides of nitrogen, for example, these same utilities' share of total U.S. emissions is two-thirds, one third and one third, respectively. In other words, from the perspective of preventing acid rain, stabilizing greenhouse-gas concentrations in the atmosphere, and meeting urban ozone standards, the electric utility sector is the

¹The phrase appears in a dissenting opinion by Justice Brandeis. See <u>New State Ice Co. v. Liebmann</u>, 285 U.S. 262, 301 (1932).

The figure reflects calculations by NRDC's Allan Chen, based on data from the U.S. Energy Information Administration's Monthly Energy Review (March 1993) and GNP deflators from the Economic Report of the President 1992. Historically, electric utilities have been the nation's most capital-intensive industry; for example, over the two years ending in 1987, their investments in plant and equipment exceeded the total recorded for all of America's airlines, railroads, mines, aerospace companies, and iron and steel foundries -- combined. See Capital Spending to Rise Sharply in 1988, Electrical World, January 1988, at 29 (\$65 billion for electric utilities versus \$64 billion for the other five industrial groups combined, for 1986-1987). In the 1990s utilities' capital investment has dropped, but still exceeds \$20 billion per year. Mountain of Imponderables Hides Industry's Future, Electrical World, Nov. 1992, at p. 10 (estimated \$23.7 billion of electric-utility construction outlays in 1992, \$15.9 billion of which covered transmission and distribution).

economy's most important point of leverage. It is also crucial on issues of radioactive waste disposal, nuclear proliferation and the preservation of free flowing rivers.

Nor does its share of GNP adequately capture the importance of electricity to U.S. households and businesses. Electricity is now responsible for almost 36% of total U.S. energy consumption, a fraction that has doubled since 1960. Compared with 1973, U.S. electricity sales in 1992 had grown by more than 60 percent, even as total energy use had increased by only 11 percent, and consumption of fossil fuels had hardly changed. Trade and popular publications abound with credible affirmations that our quality of life depends in significant part on reliable electricity service.

As electricity supply has expanded, its sources have become both more diverse and much more competitive. Utilities' monopoly over generation in the United States is long gone; more than half the Megawatts added since 1989 have been independently owned.⁵

³Data are for 1992, from the March 1993 edition of U.S. DOE's Monthly Energy Review. Energy input at U.S. electric utilities approached 30 quadrillion Btus; total U.S. energy consumption was just over 82 quadrillion Btus.

Data are from id. Total U.S. fossil fuel consumption, in quadrillion Btus, increased by less than four percent between 1973 and 1992. Petroleum and natural gas use actually declined. In Btus per dollar of gross domestic product, the U.S. economy's energy needs dropped by more than 26 percent.

⁵A 1993 survey reports that "[t]he independent power industry is now contributing 47,597 MW to the US electricity supply, and has 93,000 MW under construction or in various states of development." Electrical World, April 1993, at p. 17. The projected capacity additions are dominated by gas technologies (41%) and hydropower (30%), with other renewables and coal accounting for 13% and 17%,

At the customer's side of the meter, equally independent companies are offering myriad ways to cut bills and improve service by using electricity more efficiently or substituting non-electrical equipment.

However, the rationale for retaining unified management of some parts of the electricity sector remains strong and largely unchallenged. Transmission grids, over which power supplies are balanced and transferred, require unified control. In their interdependence and complexity, the four giant North American grids call to mind the natural ecosystems that they so profoundly influence. For ecologists, a first principle is that everything is connected to everything else. And no electrical generator can engage anywhere on one of North America's great synchronized networks without being felt everywhere on the grid; no power sale can be executed without instantaneous and imperfectly understood impacts on all of the grid's branching connections.

These and related considerations have divided the giant grids into tightly coordinated control areas, which use central computers and automatic devices to determine when power plants cycle on and off. "Centralized planning and control" may be out

respectively. <u>Id.</u> In 1991 and 1992 alone, 254 independently-owned projects went into operation, totalling more than 9,000 MW.

⁶The grids cover Quebec and Texas, respectively, and effect a West/East division of the remainder of the continent.

of fashion as a domestic economic ideology, but it remains the unchallenged law of every operating electrical grid.⁷

In all of these respects, electric power systems are profoundly different from the natural gas or telecommunications industries to which they are sometimes analogized. For these industries, a major theme in recent years has been the proliferation of competing transmission systems. But no one anticipates installation of multiple electrical grids. For the foreseeable future, customers who want access to a varied and integrated mix of distant power suppliers will have only one grid to plug into.

Just as multiple decisionmakers cannot operate a transmission system reliably, they cannot orchestrate a diversified mix of resources for meeting a healthy economy's electrical service needs at the lowest possible life-cycle costs. A central theme of modern regulation has been utilities' portfolio management function: choosing and buying the combination of generating resources, purchased power and demand-side efficiency improvements that will minimize the life-cycle cost of reliable energy services for customers collectively.

⁷ See, <u>e.g.</u>, J. A. Casazza, <u>The Changing World of Electric Power Transmission</u> (American Power Conference Address, April 14, 1993), at p. 2 ("Coordination of individual company plans on a regional basis was essential and generally practiced . . . most of the transmission systems developed in the United States as if they were a single system even though there were many different owners"). All discussions of transmission in this paper owe a substantial debt to Jack Casazza of CSA Energy Consultants and Jim Jones of the Bonneville Power Administration.

While there is much dissatisfaction with utilities'
performance historically as portfolio managers, few would go so
far as to suggest that these diversification and aggregation
functions are without value. Both grid control and resourceportfolio development are classic "natural monopolies" that
cannot be broken up without imposing significant costs on
customers and society generally. That does not mean, of course,
that it is physically impossible to have multiple entities making
decisions about acquiring resources for a utility system, any
more than it is physically impossible to run multiple power
distribution lines into a building. But in either case
abandoning that particular monopoly would mean higher costs for
customers and for society.

The portfolio functions take on particular importance in light of pervasive evidence that utilities can overcome market barriers to very large and economical energy savings. As a National Academy of Sciences panel stated bluntly in 1991, "The efficiency of practically every end use of energy can be improved relatively inexpensively." The nation's largest utility recently told the U.S. Department of Energy that energy savings represent "America's largest, least-costly untapped resource

⁸For an excellent overview of the market barriers, see Congress of the United States, Office of Technology Assessment, <u>Building Energy Efficiency</u> (May 1992), at pp. 73-85 (outlining numerous reasons "why energy efficiency has not been implemented to the level that appears economically justified").

⁹National Academy of Sciences Committee on Science, Engineering and Public Policy, <u>Policy Implications of Greenhouse</u> <u>Warming</u>, p. 74 (1991).

option. The efficiency gains of the last two decades, while considerable, have not come close to exhausting the full potential for saving energy more cheaply than producing it."10

The role of utilities in realizing that potential is widely acknowledged and steadily growing. A partial accounting of energy-efficiency investments by major U.S. utilities found \$1.8 billion in outlays for 1991, up sharply over earlier years:

"[s]pecifically, utility [demand-side management] expenditures doubled, energy savings increased by almost 50%, and demand reductions increased by one-third between 1989 and 1991."

California alone, four utilities' energy efficiency programs yielded their customers "an estimated \$1.9 billion in lifecycle net resource benefits," after accounting for rebate and administrative costs and all other utility and participant costs. 12

¹⁰Joint Comments of the Natural Resources Defense Council and the Pacific Gas and Electric Company on the U.S. Department of Energy's National Energy Strategy (July 1990), at p. i. For extended variations on the same theme, see <u>Partnerships to Progress: The Report of the President's Commission on Environmental Quality</u> (1993), pp. 28-30 (estimates of the technical potential for cost-effective electric efficiency "range between 30 and 75 percent of total electric use"); (Office of Technology Assessment, note 8 above; Alliance to Save Energy et al., <u>America's Energy Choices</u> (1991); American Gas Association et al., <u>An Alternative Energy Future</u> (April 1992); U.S. Department of Energy, <u>National Energy Strategy: Powerful Ideas for America</u> (February 1991).

¹¹Eric Hirst, <u>Electric-Utility DSM-Program Costs and Effects:</u> 1991 to 2001 (Oak Ridge National Laboratory, May 1993) (data reported by 439 utilities representing more than 80 percent of U.S. electricity sales and revenues).

¹²California Public Utilities Commission, Decision 93-09-078 (September 17, 1993), at p. 24.

Regulators' efforts to secure such benefits, and to improve energy-resource portfolio management generally, have focused increasingly on giving utilities more balanced and performance-based incentives. Essential to this enterprise, in the phrase of the National Association of Regulatory Utility Commissioners, are mechanisms for "ensur[ing] that the successful implementation of a utility's least-cost [investment and procurement] plan is its most profitable course of action." The U.S. Congress endorsed that objective strongly in the National Energy Policy Act of 1992 for both electric and gas utilities. Achieving it should mobilize utilities to attack the barriers that obstruct cost-effective efficiency; this in turn should spur the growth of a competitive energy-efficiency services industry and provide customers with more choices about energy-service quality and cost. 15

The vision of the electricity business emerging from these and many other sources is one that uniformly emphasizes competition and choice, but adapts to fundamental differences between wholesale and retail markets. In the wholesale

¹³NARUC, Profits and Planning Through Least-Cost Planning, at 57 (November 1989) (from Resolution in Support of Incentives for Electric Utility Least-Cost Planning, adopted July 27, 1989).

¹⁴See National Energy Policy Act of 1992, sections 111 and 115.

¹⁵This trend has been guided and chronicled in a series of excellent publications by the National Association of Regulatory Utility Commissioners (NARUC); see, <u>e.g.</u>, volumes I and II of NARUC's <u>Least-Cost Utility Planning Handbook</u>, and the proceedings of NARUC's four national conferences on integrated resource planning.

marketplace, where utilities buy and sell power for resale, the goal is to minimize bulk power costs; policymakers are trying to make generation more competitive and to offer entrepreneurs open access to the centralized grid.

Retail electricity markets, on the other hand, turn on quality and quantity of energy <u>services</u>. Residences and businesses have no interest in buying or reselling kilowatt-hours; they are really purchasing the heating, lighting, mechanical drive and other services that kilowatt-hours provide. Strategies designed solely to hold kilowatt-hour costs down overlook opportunities to cut service costs by increasing the efficiency of electricity consuming equipment; that was one lesson of the 1960s and 1970s, when utilities and their regulators focused on retail rates to the ultimate detriment of bills.

Many of today's regulators have been responding, at least implicitly, to the natural monopoly characteristics of utilities' portfolio management function. If society is systematically under-investing in efficiency relative to supply, obvious gains can result from ensuring that prospective generation investors evaluate their efficiency options on equal terms. Those who need additional energy services and those best positioned to achieve improved efficiencies often will be different and widely separated entities; no institution can rival utilities in their capacity to bring both groups together for mutual advantage.

For dispersed renewable energy resources with intermittent "fuels", the portfolio manager's role is different but no less important; wind and solar resources that would not fit the demand profile of any small group of customers can be invaluable supplements to an integrated, diversified system that is meeting the needs of a utility's service territory. 16

In sum, valuable resource diversification can be achieved, and investment in reserves and duplicative generation can be minimized, if utilities retain responsibility for portfolio management. Recent work by the Northwest Power Planning Council provides a rigorous partial assessment of these values; after comparing multiple scenarios of both centralized and disaggregated resource development over the next twenty years in its four state region, the Council found that potential benefits of some \$2.5 billion could be secured from "the improved coordination of resource development."¹⁷

III. THE GREAT "RETAIL WHEELING" ILLUSION

For a small but vocal group of commentators, many or most of the considerations reviewed above are beside the point. This camp wants to move electric utilities toward a very different destination, although there is sometimes confusion about whether

¹⁶This point figures strongly in the opposition to retail wheeling from the American Wind Energy Association and the Solar Energy Industries Association. See Wind Energy Weekly, September 13, 1993, at p. 1.

¹⁷Northwest Power Planning Council, 1991 Northwest Conservation and Electric Power Plan, Volume II, Part II, pp. 793-95 (1991).

they are seeking something new or hearkening back to an earlier era of regulation.

It is crucial at the outset to distinguish "retail wheeling" from what Professor Paul Joskow has called "retail competition." In the "competition" category, Joskow puts consumers' opportunities to install their own generators or substitute new end-use equipment that needs less (or no) electricity to provide equivalent or better service. Those who hear retail wheeling advocates invoke "competition" and "choice" often assume that they must be referring to one or more of these options for physically altering a customer's electricity service, or for substituting equipment using other fuels.

Yet in fact retail "wheeling" initially changes nothing about electricity service except its cost allocation. In some variants, participants would get instant access to wholesale commodity prices, which are driven by sales of surplus power from previously constructed generators. Since owners of these facilities are motivated to sell their surplus at any price that exceeds short run operating costs, they can almost always undercut rates posted by a retail utility that must recover fixed as well as operating costs in order to survive.

Another option, which the Appendix addresses in more detail, would limit retail wheeling to intervals when the host utility needed new generating capacity. Participants could then

¹⁸Professor Joskow presented this dichotomy at an Aspen seminar convened by the Energy Foundation in July of 1993. Readers should not assume that he endorses my application of it.

appropriate, for their exclusive benefit, cost reductions associated with new generation anywhere on the grid that was priced below the utility's average costs. The alternative, of course, is to spread such benefits over the entire utility system.

Those who want retail wheeling are aiming to change only one thing about their current electricity services; they want to shift elsewhere some of the costs that they are now paying. In this aspiration they are joined, of course, by approximately all of mankind.

These particular supplicants' prospects would be minimal except for an undeniable ingenuity in recasting their aspirations. The typical plea goes roughly as follows: we're tired of dealing with the same old utility company; we want a chance to shop around for our power supplies so we can find the lowest prices; it works just fine for supermarkets and gas stations -- why not electricity?

Note, however, that at no time in this litany is there any mention of breaking free from the electrical grid or taking advantage of any of the other physical alternatives for improving on business-as-usual electricity use. For industrial customers needing infusions of productivity and competitiveness, some of these omissions represent important lost opportunities -- and retail wheeling ultimately represents an unrewarding dead end.

A. RETAIL WHEELING IS NOT DESIRABLE

Much of today's utility regulation is designed to open markets to more competitors and more choices. But creating the fictional "choice" that retail wheeling represents, and calling it "competition", is really an exercise in benefitting the few at the expense of the many.

Of course, strictly speaking, the debate over retail wheeling really cannot be about "choice" at all. Because of the basic nature of electricity and transmission lines, customers cannot change the physical movement or origins of the electricity entering their buildings by "choosing" a new supplier. As explained earlier, electricity moves in response to physical laws and centralized controls that are independent of any contracts that might be made by suppliers and retail customers.

Individual customers can measure how much they use at a building or plant, but they cannot influence where it comes from. At any given time, all of the power plants owned by all of a grid's interconnected utilities are working together to meet our collective electricity needs.

Everyone wants to be able to claim the cheapest electricity on the system -- but unfortunately there is not enough to go around. Everyone would like someone else to pay for higher-cost new energy resources, environmental safeguards and transmission upgrades -- but without them no utility could maintain a clean and reliable system. If we were to let a few customers escape

their share of this collective investment, either it could not be sustained or the rest would have to pay more.

The ensuing erosion of utilities' capacity to assemble energy-resource portfolios would put other forms of upward pressure on energy bills. Part II above reviewed the reasons why many states encourage utilities to invest in opportunities to save energy that are less costly than the avoided power production. Everyone benefits when we can reduce the cost of energy services by improving energy efficiency in this way.

Yet energy savings mean reduced energy sales volumes for utilities, which must then raise electricity prices slightly to recover the fixed costs of their power supply systems; should that give neighboring suppliers without conservation programs an opportunity to grab customers and revenues? Retail wheeling advocates say yes, ignoring the costs that all of us will have to pay if utilities collectively abandon energy efficiency programs. Some of the most severely jeopardized programs yield the added benefit of helping indigent customers afford basic energy services, by targeting energy savings in their homes.

Why don't the same objections confront efforts to create analogous regulatory "fictions" about the movement of power in wholesale markets? As Section IV will explain more fully, at the wholesale level the fictions bring societal benefits without imposing remotely comparable costs. The wholesale markets really are commodity markets, in which kilowatt-hours are traded exclusively for resale; a single-minded focus on minimizing rates

per kilowatt-hour makes much more sense at that level than it does in the retail service context. Moreover, the goals of open wholesale markets and cost-minimizing portfolio management are wholly consistent, as long as utilities remain the only buyers on the wholesale markets.

Those who want to change that policy typically overlook one additional category of regulatory costs. If utilities and their regulators were to lose their systemwide resource-portfolio management and planning functions, resource development would have to emerge at least in part through uncoordinated private contracts. 19 Lacking the legitimacy of an integrated plan reflecting statewide priorities and oversight, such development would be extremely vulnerable to the conflicting desires of local land-use planners and property owners. Siting and building generation is difficult enough when the sponsors can credibly invoke findings from integrated plans that are geared to the interests of consumers collectively; to remove that broader rationale is to invite paralysis.

Also troubling are the openings for opportunistic behavior that retail wheeling creates. Those who "leave" their local utility when wholesale prices drop may want to return in haste when market conditions change. Should they be permitted to do so without restriction, in line with utilities' traditional

¹⁹As Armond Cohen has pointed out, "[a]t its core, retail wheeling . . . seek[s] to substitute short-term contractual decisions" for coherent system planning. Armond Cohen, <u>Retail Wheeling and Rhode Island's Energy Future: Issues, Problems, and Lessons from Europe</u> (July 1993), at p. 8.

obligation to serve all applicants? Some retail wheeling legislation has assumed as much, ignoring potential costs to other customers who may have to underwrite part of their utilities' ensuing resource acquisitions. And even explicit contractual disavowals of any utility obligation to serve retail—wheeling beneficiaries would have limited value in the face of later appeals by politically influential customers who no longer found the contracts advantageous.

Of course, those declared eligible for retail wheeling might never actually take advantage of the opportunity, if they received enough price concessions from their host utility. Some concessions are already occurring in response to credible threats of bypass or shifts of production to other states. One prospect, then, is that the principal impact of retail wheeling would be to provide additional leverage in rate proceedings and negotiations to parties already amply endowed, at the expense of those less favorably situated. In other words, by enacting this "reform" regulators could find themselves simply increasing the cost to other customers of maintaining some contribution to system costs by the largest customers. It is obvious why the largest customers would want this, and it is at least equally clear why everyone else has good cause to object.

B. RETAIL WHEELING IS NOT INEVITABLE

The greatest single obstacle to the retail wheeling agenda may be its reliance on explicit endorsements by the regulators

charged with overseeing the very systems that the proponents want to displace. For all the reasons canvassed earlier, retail wheeling has nothing to do with technological change or the evolution of new kinds of marketplace service and competition. Instead, it has everything to do with obliterating many regulators' policy guidelines and accounting conventions. Telling those regulators that retail wheeling is "inevitable" amounts to hoping that they will simply abandon their own prerogatives and give proponents what they want.²⁰ The results so far have been very much otherwise.

Nonetheless, a common tactic in the retail wheeling debate is to claim that the practice is breaking out, or about to break out, all over.²¹ Some proponents of retail wheeling even insist that it has been with us for years, and in one very narrow sense they have a point: there is a long if scarcely honorable tradition of reserving inexpensive power supplies for the exclusive benefit of favored constituents with large electricity appetites and at least comparable political clout. The aluminum

²⁰See, <u>e.g.</u>, Douglas Houston, <u>Demand-Side Management:</u> Ratepayers <u>Beware!</u> (November 1992), at p. 33) ("[u]nregulated suppliers eventually could break into captive retail markets, in particular to serve industrial customers"); Western Interstate Energy Board, Western Energy Update, No. 93-1, at p. 2 (1993) (characterizing opposition to retail wheeling as "swimming upstream": "[t]he countervailing viewpoint is that while retail wheeling is not desired by any parties, except large industrial customers, competition and technology inevitably will lead to retail wheeling").

²¹See, <u>e.g.</u>, <u>Utilities Brace for a Buyer's Market in Electricity</u>, New York Times, May 9, 1993, p. 10F: "At least four states -- California, Michigan, New Mexico and Texas -- are experimenting with, or considering, access at the retail level."

industry has been a frequent beneficiary, but special deals have been struck at various times for parties as varied as Shearson Lehman Brothers, Owens-Corning Fiberglass, the General Motors Corporation, and California's Lawrence Livermore Laboratory.²²

This is a practice almost as old as commerce in electricity. Whatever its merits -- and its net effect almost certainly is to suppress job growth²³ -- it does not force a commodity model on the retail electricity business or challenge utilities' portfolio management role. It is astonishing, moreover, to see this kind of selective governmental intervention in the marketplace embraced as "retail wheeling" by those who claim to be advocates of unfettered competition.²⁴

Nor have these analogies proved persuasive to state level decisionmakers. All attempts to introduce broad-scale retail

²²See, <u>e.g.</u>, R. John Dingle, <u>Retail Wheeling in the Electric Utility Industry: It's Working</u>, Cogeneration and Resource Recovery (July/August 1992); Mary O'Driscoll, <u>Elcon Study Tracks Retail Wheeling Developments</u>, The Energy Daily (July 26, 1993), at p. 1 (examples of retail wheeling for the benefit of particular end users, including Dow Chemical and Aetna Life and Casualty).

²³This form of retail wheeling shifts costs from large, energy-intensive businesses to entities that use less electricity. Yet "nearly all of the U.S. industrial job growth in the last five years has come from firms with less than 20 employees; job growth in larger firms has been modest or negative." Armond Cohen, Retail Wheeling and Rhode Island's Energy Future: Issues, Problems, and Lessons from Europe (July 1993), at p. 25 (citing April 1993 report by Cognetics, Inc.). For an extended analysis of promotional rates, see Ralph Cavanagh, Responsible Power Marketing in an Increasingly Competitive Era, 5 Yale Journal on Regulation 331 (1988).

²⁴Yet some will be found doing precisely that in the sources cited above in note 22.

wheeling in the United States have failed. The federal government said no in legislation passed late in 1992; industrial interests had "urged Congress to allow retail wheeling as part of the Energy Policy Act." Congress responded by prohibiting federally-ordered retail wheeling and leaving unchanged the authority of individual states to act on the issue. 26

Then, as the debate shifted to the state level, New Mexico, Rhode Island, Texas and California put the idea on hold in 1993.²⁷ A Michigan administrative law judge not only turned down

Some contend that federal law now leaves states without authority to order retail wheeling. See <u>Written Comments of Municipal Utilities on Strategies for Regulating Investor-Owned Utilities</u>, March 15, 1993, CPUC, at 15-16 (arguing that "the subject matter of transmission access for electricity in interstate commerce is preempted by federal law"). Detroit Edison has advanced a similar argument (Case Nos. U-10143 & U-10176, Direct Testimony of M.E. Champley (March 1, 1993) at pp. 57-58), which an administrative law judge subsequently rejected. Proposal for Decision by Administrative Law Judge Robert E. Hollenshead, Case Nos. U-10143 & 10176 (August 27, 1993).

²⁵Division of Strategic Planning, California Public Utilities Commission, <u>California's Electric Services Industry: Perspectives on the Past, Strategies for the Future</u> (February 1993), at p. 126 (citing Letter from "A Coalition of Industrial Electricity Users" to The Honorable John Dingell, June 16, 1992).

²⁶Section 722 of the Energy Policy Act provides in part that "No order issued under this Act shall be conditioned upon or require the transmission of electric energy (1) directly to an ultimate consumer or (2) to, or for the benefit of, an entity if such electric energy would be sold by such entity directly to an ultimate consumer . . Nothing in this subsection shall affect any authority of any State or local government under State law concerning the transmission of electric energy directly to an ultimate consumer."

²⁷California's foray is the only one not addressed in the Appendix; it took the form of a general letter of inquiry by Senator Robert Pressley, Chairman of the Senate Commission on Appropriations. He received vivid responses from a wide range of interests and has not taken further action.

a proposed retail wheeling "experiment", but concluded that his Commission lacked authority to mandate retail wheeling. Others are taking a look at the issue; most if not all can be expected to decline once they have tallied all the costs and benefits. An Appendix gives further details on the state-by-state campaign.

This is not to suggest that states will suddenly abandon special electricity subsidies for favored industries; Nevada is the latest entrant in that particular sweepstakes. Thus, when the headline in The Energy Daily of July 7, 1993 read "Nevada Adopts Retail Wheeling Bill", a less newsworthy but more accurate version would have been "Nevada Legislature Tries to Lure Steel Plant from Arizona."

When proponents try to expand the scope of retail wheeling, however, the same motivations that drove Nevada's bill begin to work against them. The first state to accept the retail wheeling model will be putting its own utilities in play with no assurance of reciprocity from neighboring jurisdictions. Or, in the more pungent terms of one New Mexico commentator, "If you're the only kid on the block saying 'play with my toy', then everyone will play with your toy."²⁸

No discussion of this topic is complete without analogies to the airline, telecommunications and natural gas industries.

Those analogies would have some merit if the focus were on electricity regulators' responses to the emerging reality of retail competition, as opposed to the regulatory fiction of

²⁸Electric Power Alert, March 17, 1993, p. 1.

retail wheeling. Regulatory reform for both telecommunications and natural gas was driven by a growing array of options for physically bypassing the transmission system; 29 in neither case did regulators choose to supplement these options by creating the illusion of bypass. For airlines, the regulatory action most comparable to retail wheeling would have been to allow passengers on United or American flights to designate Southwest as their carrier without changing planes or destinations.

The handful of countries that have institutionalized retail wheeling used the mandate of central governments. That option is foreign to U.S. electric regulatory tradition and prohibited by U.S. law, as noted earlier. Moreover, the examples set abroad are proving to be anything but compelling.

The most celebrated case in point is the United Kingdom. In March 1990, a determined Thatcher administration executed a nationwide "privatization" of what historically had been a state-owned generation and transmission system. At a stroke, what had been one gigantic nationwide generating company became two gigantic nationwide generating companies engaged in a less than wholly robust competition. Also announced was a phase-in of retail wheeling. Nuclear power plants were shepherded into a special status that effectively exempted them from competitive

²⁹See, <u>e.g.</u>, S. Coll, The Deal of the Century (1986), at p. 358 (quoting U.S. District Court Judge Harold Greene):

The basic fact of the phone industry is that it grew up when it was a natural monopoly: wooden poles and copper wires. Once it became possible to bypass this network through microwaves, AT&T's monopoly could not survive.

pressures. Excerpts from a November 1992 review by the Financial Times of London provide an eloquent overall assessment:

- "In the long runup to privatization, a number of factors combined to pull the plan far from its original aims and to produce a hybrid system which has caused many new difficulties without establishing a fully commercial market . . . The protected market shares of nuclear, natural gas and, possibly, British Coal, have pushed the area open to competition to the margins of the system."
- "The system seems particularly ill-adapted to changes intended to redirect electricity generation or to reduce electricity consumption for environmental reasons."
- "The benefits which were promised . . ., namely cheaper prices, have not emerged, and even the biggest consumers have complained . . . that the prices in the new system are making their businesses uncompetitive against companies in the rest of Europe."
- "The new system in the UK has been closely studied by many other countries but is unlikely to be imitated."³⁰

In July 1993, the UK's principal electricity regulator published an equally ominous review of recent developments:

- "I have once again received strong complaints about increasing prices in the electricity Pool . . . If present prices are maintained, overall Pool Selling Price will be nearly 20% higher than last year, following an 8% increase over the previous year."
- "The need to cover avoidable costs does not justify any further price increase - nor did it justify a price increase as high as the recent one."
- "There is widespread concern at the perceived ability of major generators to raise prices at will. The position of market power which the major generators hold in generation has adverse implications for the effectiveness of competition in supply."³¹

³⁰Andrew Holmes, Privatising British Electricity: Restructuring and Resistance (November 1992), at pp. 1-2.

³¹Office of Electricity Regulation [UK], <u>Pool Price Statement</u> (July 1993), at pp. i-iii.

These problems certainly are not outgrowths exclusively or even primarily of retail wheeling; obviously British wholesale markets are still far less competitive than many of their U.S. counterparts. But the UK's loss of luster has clear ramifications for claims that retail wheeling is politically irresistible. Other unwelcome outgrowths of the new UK regime were a 50 percent reduction in research and development outlays and strong incentives for distribution companies "to sell more electricity as this is the only way that they can earn revenue." In mid-1993, the UK electricity regulator responded — tardily and ironically — with an effort to break the link between the distribution companies' profits and their sales volumes. 33

The Norwegian case is even less mature, but it already offers cautionary tales. Restructuring began in January 1991; robust retail wheeling options are available only to large customers, who are using them to take advantage of depressed spot

³²See Ragnar Lofstedt, <u>Energy Conservation in England and Wales</u> -- what has happened following privatization of the electric sector (1993), at 117-18.

³³The new system appears in an undated document issued by the Office of Electricity Regulation entitled <u>The Supply Price Control: Proposals</u>. The document proposes to fix total revenue per distribution company at 10 million pounds, "plus an allowance per customer served plus an allowance per kilowatt hour sold" (p. iii). The action responds to "concern that the present form of price control provides an artificial incentive for the [distribution companies] to sell more units, when in fact a more economic way of meeting customers' requirements might be through investments to reduce the amount of energy required" (p. iv). Unfortunately, this reform is set to expire with the onset of universal retail wheeling in 1998.

market prices induced by large power surpluses. "Most of the current contracts are . . . short term, one year is the most common."³⁴

No Norwegian institution is acting as an electric-resource portfolio manager; instead, a scramble is on to use up the existing portfolio. Utilities are introducing promotional practices in efforts to boost electricity consumption, which -- at 19,000 kWh per household per year -- already ranks among the highest in the world. Utilities have no incentive to invest in end-use efficiency. Norway is unique in its virtually exclusive reliance on an overbuilt hydropower system, but these policies are destroying potentially lucrative opportunities to displace fossil fuels elsewhere; for any country whose utilities retain significant fossil dependence, the environmental implications of the Norwegian model should be appalling.

³⁴See Jan Moen, <u>A Review of Developments in Key Markets -- Norway</u> (World Electricity, 9 & 10 November 1992), at pp. 13.3-13.4. Full retail wheeling prerogatives are reserved for loads above 2 MW and 5 GWh.

³⁵See <u>id.</u> at p. 13.3 (promotional tariffs to promote increased use of electricity for space heat); K. Livik et al., <u>Consequences for tariffs and end-use after deregulation</u>: <u>Experiences from the Norwegian utility industry</u> (1993), at p. 97 (mean household consumption).

³⁶See <u>id.</u> at p. 100: "Except in very special cases the deregulated market so far [has] created very few incentives for utility companies to invest in cost-effective customer energy efficiency . . . The Energy Act has caused frustration and uncertainty for both the utilities and consumers regarding the role of energy efficiency and DSM."

IV. SUSTAINABLE ENERGY FUTURES

Retail wheeling advocacy begins from the incontestable premise that commodity markets are more competitive when there are multiple buyers and sellers of the commodities. It errs in its attempt unreflectively to impose that insight on retail markets for electricity services, where a commodity orientation is both economically and environmentally inappropriate.

But this same orientation is well suited to wholesale markets, as the framers of the National Energy Policy Act understood; even as they were ousting federal authorities from any role in promoting retail wheeling, they were working to install the prerequisites for competitive commodity markets at the wholesale level. If 3000-odd utilities can choose freely among an even wider universe of potential generators and brokers, incentives to maximize efficiency and minimize costs of generation will become much stronger. That is also the principal social benefit typically claimed for retail wheeling. If we can get it by reforming wholesale markets, partisans on every side of this issue will have cause to rejoice. This goal is not yet realized and abundant barriers remain to be eliminated, which is one more reason for a large number of potential allies not to get sidetracked on peripheral disputes.

Moreover, the case against retail wheeling is not an argument for perpetuating the status quo in utility regulation. Traditional cost-of-service regulation hardly motivates utilities to be least-cost service providers and portfolio managers;

instead, as documented extensively elsewhere, it perversely ties utilities' profits to their energy sales volumes. Equally perversely, it also tends to reward utilities' shareholders based — in Tom Page's phrase — on "tonnage of capital expended" by utility managers.

These problems are not intractable; indeed, they increasingly are recognized as largely unintended outgrowths of an obsolete system of price regulation. Modern regulators want performance-based systems that do not bias utilities' investment choices inappropriately. Achieving that objective requires first breaking the link between utilities' profits and sales, and then tying those profits systematically to progress in improving operating efficiencies, reducing customers' bills and minimizing environmental costs.

The first of these initiatives is straightforward, and represents a substantial step forward by itself. Mechanisms for "decoupling" profits from sales are in place in California, Maine, New York, and Washington; Oregon and Montana should follow soon, and the issue is now on every state's agenda as a result of the National Energy Policy Act.³⁷ There are several proven "decoupling" options; they operate through regular but extremely

³⁷Section 111 requires every state to take up the issue within two years of the Act's October 1992 effective date. Washington recently reaffirmed its decoupling mechanism; see <u>As Puget Power Appeals Rate Case</u>, <u>Observers Hail PRAM Reprieve</u>, Clearing Up, October 4, 1993, at p. 11.

modest rate fluctuations in both directions (which are not intended to affect utilities' overall profitability). 38

Balanced systems of performance-based rewards are more complex, but can draw on an extensive base of experience around the nation. The point is to ensure that utilities' earnings opportunities are not skewing choices among purchased power, utility-owned resources, and energy efficiency improvements.

More than a dozen states are experimenting with "shared savings" systems, which reward utilities for investment in cost-effective energy efficiency improvements. Extensive interest has emerged also in systems for acknowledging exemplary performance in fuel and power procurement. Former Maine regulator David Moskovitz has championed the principle that utilities' shareholders should be compensated based on relative changes in customers' average bills, compared to similarly situated utilities.

As to environmental costs, simply ensuring that utilities are held responsible for minimizing financial risks from plausible carbon dioxide regulations is a strong step in the right direction.³⁹ This is a further addition to the long list

³⁸The point is simply to ensure that profitability is not affected by sales fluctuations that regulators did not anticipate when they determined appropriate price levels for utility services. A comprehensive empirical assessment of decoupling systems in operation will be published imminently by Joseph Eto and his colleagues at the Lawrence Berkeley Laboratory.

³⁹See R. Cavanagh, A. Gupta, D. Lashof and M. Tatsutani, <u>Utilities and Fossil Fuel Emissions: Who Bears the Risks of Future Regulation?</u>, The Electricity Journal (March 1993), at p. 64 (citing CO₂ risk shifting policies adopted recently by regulators in California, Oregon and Wisconsin).

of benefits that utilities can secure much better in their role as systemwide portfolio managers than any substitutes that retail wheeling regimes are likely to produce.

All of these systems represent a decisive break with conventional practice, but it is not in the provision of incentives that their innovations lie. The soundest cliche of regulatory policy may be that "all regulation is incentive regulation"; 40 the challenge lies in aligning those incentives with societal interests.

Once that is accomplished, through systems that combine decoupling with the performance-based features discussed above, portfolio management can be left largely in the hands of utility managers. The need for regulatory oversight of utilities' procurement decisions varies inversely with the rationality of their incentive systems; a few states have found themselves recently at the wrong end of both spectrums, and are busy setting matters right.

Increasing competition should both pervade and complement the wholesale-commodity and the retail-service regimes outlined in this section. Wholesale markets will open to receive more independent generators; they also will accommodate conservation-based power transfers, in which inexpensive energy savings become the basis for more lucrative resale of the saved energy. A defect of traditional cost-of-service regulation is that

⁴⁰Peter Bradford, Chair of the New York Public Service Commission, either originated this phrase or should have.

utilities typically have no financial incentive to invest in energy savings that cost less than wholesale power prices; in general, retail sales of inefficiently used electricity are more lucrative than any resales of the saved energy, because the retail price per kilowatt-hour is almost always higher and the utility gets to keep the difference. Again, the solution lies in combining decoupling mechanisms with performance-based rewards and penalties.

In their retail functions, utilities must contend with both increasingly attractive self-generation technologies and a host of independent companies with energy-efficiency options to sell. But this competition will turn on who can provide the best energy service at the lowest total cost to the customer; it is a battle of energy-service bills, not energy-commodity costs. That is good news for both the economy and the environment.

Under this system, those who want access to the integrated grid must share utilities' costs of creating and sustaining the balanced resource portfolio that is needed in order to maximize the benefits of the grid to society. Those costs should be allocated based on the relative responsibility of customer classes for the addition of new resources, whether efficiency— or generation—based.⁴¹

⁴¹An incisive review of these cost allocation issues appears in Marika Tatsutani, <u>Allocation of DSM Costs to Utility Customers</u> (NRDC, September 1993); and Paul Centolella, Barbara Barkovitch and Katherine Yap, <u>Cost Allocation for Electric Utility Conservation and Load Management Programs</u> (National Association of Regulatory Utility Commissioners, February 1993).

If individual customers can get a better deal by leaving the grid, they are free to take it; utilities' continuing challenge will be to minimize the number of customers for whom that condition holds. Part of the answer may be increased pricing flexibility, but the best way to meet the challenge is simultaneously to help customers seize all cost-effective efficiency options and to minimize utilities' generation and procurement costs. The result should be increased choice and competitive benefits for all customers, not just those politically potent enough to win favorable cost accounting under retail wheeling.

This system is not hypothetical or visionary; it is already emerging across much of the United States. Its strength comes in part from its intrinsic appeal to the very utilities and industries that are central to its success; it stakes out their future in the arena of value-added services, as opposed to the relatively barren prospects of a commercial existence based on the churning of cheap commodities. It is in part because retail wheeling advocates are pulling in exactly the opposite direction that they are unlikely to succeed.

Ironically, among the biggest potential winners under the service/portfolio model are the large industrial customers that some see as retail wheeling's principal constituency.

Appropriately, these customers have been winning increased access to the very utility-financed energy efficiency investments that retail wheeling imperils, and they have been the largest

beneficiaries of substantial reductions in inflation-adjusted electricity costs. 42 From 1981 to 1992, the U.S. electricity bill actually dropped by about five percent in real terms despite a growth in electricity sales of 28 percent; this record contrasts sharply with that compiled between 1973 and 1981, when the same annual costs increased by almost 78 percent although electricity sales increased by only 25 percent. 43 Regulators might be forgiven for wondering whether wrenching course changes should wait until something is more obviously broken.

V. <u>CONCLUSION</u>

If utilities were going to live or die solely by how low they could drive the short-term commodity price of electricity, they would have every reason to resist investments to reduce pollution or to help customers save energy. Less responsible companies would gain an unjustified advantage, even as the industry's overall marketing strategy returned with a vengeance to an ancient and discredited slogan: "the more you use, the less you pay." That particular incentive system left a legacy of both economic and environmental waste.

⁴²See, <u>e.g.</u>, Jennifer Jordan and Steven Nadel, <u>Industrial Demand-Side Management Programs: What's Happened, What Works, What's Needed (Pacific Northwest Laboratories, March 1993) (concluding, at p. 5, that "experience to date shows that successful programs can be designed and indicates ways to design even more successful programs in the future").</u>

⁴³The cost figures reflect calculations by NRDC's Allan Chen, which are described in note 2 above. Sales data are from U.S. Department of Energy, Energy Information Administration, Monthly Energy Review (March 1993), at p. 91.

There is no disputing that the utility business is changing and that competition for energy services is increasing.

Utilities cannot expect either to build power plants or provide energy conservation services unless they do it better than a host of independent companies. Regulators should accept and welcome that kind of genuine competition; it's the sham variety that they should reject.

Everyone stands to gain from a search for better energy services that cost less; today's increasingly competitive marketplace is yielding a host of exciting new technologies and efficiencies. As a result, every utility must earn its customers' business, and those that cannot will not survive. But beware those who would rewrite the rules of competition for their own benefit, and drive a wedge between society's and utilities' interests.

APPENDIX: NOTES ON SOME RECENT RETAIL WHEELING CAMPAIGNS

A. NEW MEXICO, 1993

State Senator Tom Wray's SB 501 was a retail-wheeling purists's delight. It would have given retail customers automatic access to wholesale market prices, while allowing them to return at any time to conventional utility pricing without penalty. It also guaranteed that no customer class could be forced to bear higher costs as a result of others' retail wheeling elections, which could only have been achieved over the prostrate forms of aroused and distressed utility shareholders. An environmental/utility coalition helped extinguish S.B. 501 in March of 1993; the issue was referred to an "interim committee" for study over the next two years.

B. RHODE ISLAND, 1993

The instigator here was Hydro-Quebec, which sought to bypass Rhode Island's utilities and transact directly with large industrial customers. Key terms of the offer were as follows:

- Hydro-Quebec would sell 250 Megawatts at a 65 percent capacity factor for four years on a take or pay basis;
- The price would start at 4.4 cents per kilowatt-hour and would escalate automatically over the four year period by a total of at least 20 percent, not including charges for using the New England transmission system and a supplemental escalator tied to the spot market price of oil (for every dollar increase in that price above \$17 per barrel, the electricity price would increase by 6%).

In the view of analysts hired by the Rhode Island Public Utilities Commission, these redirected dollar flows would shift costs of about \$26 million per year to Rhode Island's non-

industrial customers, with rate impacts of up to 40 percent. 44 A PUC press statement issued in May of 1993 diplomatically declared "that the power offered does not meet Rhode Island's needs at this time. 1145

C. TEXAS, 1991-1993

Proponents of retail wheeling sometimes cite a proposed Texas PUC rule that would

allow cogenerators to wheel power from a qualifying [generating] facility (QF) to a portion of existing or new utility retail load. The utility would buy power from a QF at a price agreed to between the QF and the customer, and then resell it to the customer at no markup except for a compensatory transmission service fee. Since these transactions would be allowed only when the utility needs additional capacity and will be limited to no more capacity than the utility is otherwise seeking to add itself, this proposal will not create a "stranded investment" problem for the utility. Such transactions would also be limited to 10 MW or more in order to avoid administrative complications. 46

One outgrowth of all these "avoided administrative complications", of course, is that large industrial customers would get the best of all worlds at everyone else's expense: whenever new power supply were available at costs below system

⁴⁴ H. Yoshimura, La Capra Associates, <u>Evaluation of the Hydro-Quebec Firm Power and Energy Proposal</u>, January 29, 1993.

⁴⁵Statement Regarding Hydro-Quebec and Rhode Island Negotiations for Electric Power Sales (issued May 1993, and referencing May 11, 1993 meeting between James J. Malachowski, Chairman of the Rhode Island Public Utilities Commission, and M.-Bernard Guertin, Director of External Markets for Hydro-Quebec).

⁴⁶Petition of Texas Industrial Energy Consumers for Amendment of PUC Substantive Rules 23.31 and 23.66 (filed December 3, 1991), at p. 4.

average costs, they would reserve the full economic benefit for themselves; when conditions were otherwise, they could go on buying power at system average rates. Under the circumstances, it is not altogether surprising that the author and proponent of the amendment is "a voluntary association of large industrial electricity consumers in the State of Texas." The proposal has attracted no discernible PUC interest since its publication in December of 1991.

D. <u>NEVADA</u>, 1993

Nevada's "retail wheeling bill" (SB 231) amends Chapter 704 of the Nevada Revised Statutes. It only applies to new industrial loads that agree to remain in Nevada for 30 years, post appropriate security to defray any utility-incurred costs [section 2], make a capital investment of \$50 million in Nevada, and are "engaged in the primary trade of preparing, fabricating, manufacturing or otherwise processing raw material or an intermediate product through a process in which at least 50 percent of the material or product is recycled on site" [section 4]. The number of companies that currently are likely to meet all of these conditions does not appreciably exceed one.

For such a business, "the public service commission of Nevada may authorize a public utility that furnishes electricity for the business to purchase or transmit a portion of the electricity provided to the business to reduce the overall cost of the electricity to the business" [section 2]. The Commission

⁴⁷<u>Id.</u> at p. 2.

must "ensure that the rates or charges assessed to other customers of the public utility do not subsidize the cost of providing service to the business." Id.

If all of this spells retail wheeling, then Adam Smith was a utility regulator.

E. <u>MICHIGAN</u>, 1992-1993

The Association of Businesses Advocating Tariff Equity

(ABATE) filed an application in August 1992 to set aside for its

members 150 MW of new power supply whenever Michigan utilities

require additional capacity. Participants in this "experiment"

would be required to have a minimum demand of 5 MW; they would be

able to assign their purchase commitment to other customers, and

they could resume service at otherwise applicable electricity

prices after five years without penalty. Also seeking permission

to undertake comparable experiments were the Dow Chemical Company

and several other entities, including a number of Michigan

colleges and universities.

Staff for the Michigan Commission calculated that the proposed experiment would shift to nonparticipants costs totalling at least \$41 million per year. Supplemental costs significantly above even that sum would follow inevitable increases in utilities' overall cost of capital. A utility

⁴⁸See Direct Testimony of John Abramson, Director of the Electric Division, Michigan Public Service Commission, Case Nos. U-10143 & U-10176 (March 1, 1993), at pp. 22-23 (estimating \$59 million per year impact on Detroit Edison's revenue requirement as a result of forced shift to use of more equity and less debt capital in company's capital structure in the aftermath of retail wheeling) & p. 49 (estimating Michigan utilities' potential loss of

witness acidly concluded that "dollars will be wheeled out of the pockets of nonretail wheeling customers and into the pockets of retail wheeling customers and their new suppliers." A senior Commission staffer offered a related objection:

"[T]he industrial customers want the best of both worlds; protection for most of their supply in terms of rates, conditions of service, etc. as they have under current regulatory law and practice and, at the same time, permission to take advantage of windows of opportunity that might present themselves due to supply niches beyond the local utility system." 50

On August 27, 1993, an Administrative Law Judge filed a 108 page Proposal for Decision, recommending against adoption of the proposed experimental retail wheeling programs.⁵¹ The proposed decision includes findings that (1) state Commissions are not preempted by federal law from authorizing retail wheeling;⁵² (2) Michigan state law does not grant the Commission authority to mandate retail wheeling, although regulation of voluntary programs is permitted; (3) third-party providers of retail wheeling would be delivering the functional equivalent of public utility service and would have to obtain certificates of public

operating income under the experiment).

⁴⁹Direct Testimony of M.E. Champley, Vice President, Detroit Edison, Case Nos. U-10143 & 10176 (March 1, 1993), at p. 42.

⁵⁰Direct Testimony of John Abramson, note 48 above, at pp. 35-36.

⁵¹Proposal for Decision by Administrative Law Judge Robert E. Hollenshead, Case Nos. U-1-143 & U-10176 (Aug. 27, 1993).

⁵²See <u>id.</u> at pp. 60-61; the judge's very brief analysis relies exclusively on the disclaimer of intent to "affect" state authority over retail wheeling in section 722(3) of the National Energy Policy Act of 1992.

convenience and necessity; (4) proponents' specific retail wheeling proposals are contrary to the public interest, because nonparticipants "will most likely be negatively affected";⁵³ (5) retail wheeling implies changes in utilities' obligation to serve participants; (6) utilities should be encouraged to develop new rates and service options to meet the needs of their customers; and (7) the Commission should authorize its utilities to negotiate "voluntary retail wheeling programs" when they need new supplies of electricity ("[t]he Commission should address these voluntary retail wheeling programs on a case-by-case basis to determine whether they are in the public interest"⁵⁴).

The matter remains under advisement at the Michigan Commission.

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⁵³The Administrative Law Judge also concluded that "[i]n order for retail wheeling to be in the public interest, there should be a showing that there will be a net benefit to all ratepayers or at least a showing that customers not participating in retail wheeling will not be negatively affected." <u>Id.</u> at p. 79.

⁵⁴<u>Id.</u> at p. 108.