THE VALIDITY OF UTILITY
CONSERVATION PROGRAMS
ACCORDING TO GENERALLY
ACCEPTED REGULATORY PRINCIPLES

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There is a tremendous potential for making energy supplies available for new
uses through improved efficiency in energy use. While higher energy prices will act to
stimulate investment in conservation measures, market imperfections are likely to
result in lower levels of spending on conservation than would be optimal.

While both utilities and customers may benefit from increased development of
the conservation potential, many utilities have not proceeded aggressively in
promoting conservation. In part, this hesitation stems from uncertainty over the
extent to which energy conservation programs fit traditional notions of the utility’s
role and our conceptions about the goals and objectives of utility regulation.

Much of this uncertainty results from a tension between two quite different
models of utility regulation: On one hand, there are those who argue that, while
utilities are natural monopolies serving markets in which effective competition is
impossible, the goal of regulation is to attempt to duplicate the results which would
obtain if competition did exist. On the other hand, utility operations may be regarded
as a public service: the utility is given a franchise to provide those things which the
public decides, through public institutions, that it wants. Extensive utility conserva-
tion efforts fit more easily with the second of these models.

One common view is that the existing system of utility regulation fails to
provide incentives for innovation and change. In a drastically altered energy market,
this failing may be critical. In response to such concerns, proponents of the “natural
monopoly” model now argue for deregulation of the generation component of the

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The authors acknowledge the valuable research assistance provided by Marc Press,
Duke University Law School, class of 1983; and David Holt and Doug McCoy, Duke
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utility business. At this point, the two models diverge sharply. Regulation based on ideas of controlling the natural monopoly would logically not extend to the conservation market. If regulation is simply a vehicle to achieve agreed public goals, there is no reason not to extend it to conservation measures that are seen to be in the public interest.

Legal challenges to utility conservation programs may discourage utilities and utility commissions from adopting such initiatives. But many of the most frequently raised legal objections lack merit. For example, it is sometimes urged that utilities have an obligation to expand in order to be ready to meet any and all future demands for service. But there is certainly no basis for this position in the common law duty to serve. And the cases decided under state utility regulation statutes have recognized that expansion to meet growth is neither always required nor uniformly desirable.

Utility commission determinations on rate and service issues necessarily entail balancing many permissible but conflicting objectives. Since there is no mathematical formula for determining these issues, courts should allow commissions a wide latitude in selecting appropriate rate and service combinations. But judicial deference to commission decisions is limited: commissions must provide coherent rationales for their decisions based upon evidence in the record. If a rate or service policy transgresses some overriding norm, it will be invalidated.

Proposed utility conservation financing programs of various kinds have been attacked on the ground that they unjustly discriminate against nonparticipants. Such claims have been urged both on behalf of nonparticipants in general and on behalf of identifiable groups of nonparticipants with specific concerns. Viewed from the proper perspective, such claims lack merit. The threat that they might be raised should thus not deter utilities and regulatory commissions from adopting cost-effective conservation programs.

Utility financing programs have also been challenged on the ground that utility commissions lack jurisdictional authority to approve or require such efforts. Analogies to promotional activities, charitable contributions, research and advertising expenditures, and other utility expenses not immediately related to providing electricity would indicate that commission jurisdiction clearly does extend to conservation activities in virtually all states.

Thus, the most frequently raised objections to utility conservation financing programs are not tenable. Utilities and utility commissions should be free to initiate those programs free of significant threats on this score.
I

THE CONSERVATION ENERGY RESOURCE

In hindsight, America has made some monumentally bad investments in energy consuming buildings, machinery, and production processes. We have a housing stock that is overlit, overheated, overcooled, and underinsulated; many industrial processes that waste heat prolifically; and huge commercial buildings wired and ducted in ways which make careful energy management in them just about impossible.\(^1\) Had the rapid escalation in the costs of acquiring new fuel been foreseen, rational decisions could have substantially eliminated this built-in propensity to waste energy that now runs through the entire social structure.

But United States energy decisions have shown no such prescience. Prices did escalate rapidly, due to a combination of OPEC cartel actions, increased costs of environmental and health and safety controls on powerplants, a secular escalation in the costs of capital construction, high interest rates, pre-construction governmental approval processes, and other factors.\(^2\) As a result of our failure to anticipate these influences, this country has a rich vein of "conservation energy" that can be mined to reduce our need to purchase expensive new energy. We can reduce the drain of dollars going to new energy by taking advantage of the available opportunities to conserve.


2. The national average revenue for a kilowatt-hour sold to residential customers was 2.10¢ in 1970, 3.21¢ in 1975, and 4.33¢ in 1979. Edison Electric Institute, *Yearbook of the Electric Utility Industry*, Washington, DC: Edison Electric Institute,
The residential sector, which accounted for 22.5% of total U.S. energy consumption in 1978, provides some ready evidence of the significance of conservation energy. The Office of Technology Assessment estimates that 30% to 60% of the energy used in the current building stock is wasted, meaning that there are cost-effective methods for avoiding consumption of that amount.\textsuperscript{3} The Pacific Gas and Electric Company (PG&E) finds that a combination of simple improvements to existing housing in its service area could produce conservation energy at a cost of $0.028 per kilowatt-hour (kWh), while PG&E's cost for producing a kilowatt-hour through newly constructed powerplants is $0.072.\textsuperscript{4} Pacific Power and Light Company's analogous figures are $0.015 and $0.042.\textsuperscript{5} A study for the California Energy Commission shows that cost-effective energy conservation measures can eliminate one-half of that state's 1992 electricity needs beyond what will be provided by existing plants and those currently under construction. The improvements in question include only measures to improve the efficiency of energy use, not those which would restrict or ration supplies. Such a reduction could be achieved while still pursuing an ambitious goal of reducing the state's dependence on oil and gas by 50%, thus demonstrating that energy conservation is both cost-effective and consistent with national security interests in reducing fossil fuel dependence.\textsuperscript{6}

The Solar Energy Research Institute (SERI) estimates that if cost-effective efficiency improvements were made in the residential sector, demand for new supplies of electricity would actually decline from a 1978 sales figure of 679 billion kWh to 625 billion in 2000. Throughout the economy, SERI estimates that the annual energy growth rate could


\textsuperscript{5} C. P. Davenport, remarks, \textit{Energy Efficiency and the Utilities}, Sacramento, CA: California Public Utility Commission, 1980, p. 18. Even utilities that are not expanding can save by using conservation energy, if doing so allows them to avoid the costs of running their most expensive existing units, such as oil burners. For example, the cost per kWh of running an efficient oil burner in the New England Power Pool is \$0.078. Reinier H.J.H. Lock, \textit{Statewide Purchase Rates Under Section 210 of PURPA}, 3 SOLAR L. REP. 419, 426 (1981).

be held to only 0.4% per year to the year 2000 through such a cost-effective conservation energy program.7

Conservation energy is not only abundant and relatively inexpensive in the residential sector but is deeply embedded there. The Bureau of Census’ preliminary estimate is that there were 79.87 million housing units in the U.S. in 1980. This is projected to grow to 96.65 million in 1990. New construction will account for an estimated 26 million of those 1990 units, meaning that 70.65 million of today’s dwellings will still be occupied in 1990. SERI has estimated roughly 40 million new units in the year 2000, with 80% of today’s housing stock—about 64 million units—still in use.8

Conservation energy investments are cost-effective up to the point at which their cost equals the cost of additional new supplies of energy. While some conservation will occur in the existing stock because of consumer responses to increased energy prices, a variety of impediments will prevent consumers acting alone from taking advantage of all cost-effective conservation sources. Rental housing accounts for one-third of the existing number of dwellings. Rental property owners who pass on utility costs to renters have less incentive to improve energy efficiency; renters who feel the effects of rising prices have little opportunity to make conservation investments in housing they do not own and in which they may not be living long enough to capture the full savings. Even in the owner-occupied portion of the residential sector, survey research indicates that consumers do not yet appreciate the importance of comparing conservation energy costs to energy prices over the life of conservation measures. They tend to give inordinate weight to the front-end costs of many conservation measures. Some individuals, of course, simply cannot afford to make the initial investment in conservation, even though over the life of a particular measure they will more than recoup those costs through energy savings. These and other factors contribute to a substantial lag in the conservation energy market. One estimate is that it will take 14 to 25 years for purchases of conservation energy to reach the point which would be rational today, assuming a perfectly functioning market.9

Cost-effective response to current consumer prices of purchased energy is severely inhibited by these factors. These problems are compounded by the utility practice of embedded cost pricing, under

8. Id., p. 86.
which prices reflect the approximate average cost of supplying energy to the consumer. In times when the prices of new energy supply exceed average costs, consumers will tend to overpurchase energy, from the perspective of social efficiency, even if the consumer market for energy services is functioning perfectly.10 In sum, a significant amount of cost-effective conservation energy is currently available, based on known technologies, which will go largely untapped for a long time if left to the unassisted workings of the consumer market.

II

UTILITY INVOLVEMENT
IN CONSERVATION PROGRAMS

In light of availability of conservation energy that will otherwise go unused, it is no great surprise that many ideas for government programs to stimulate conservation are currently being promoted. Nor is it surprising that, because of the disarray in both theory and politics about

10. “Socially efficient” means that society’s resources are being put to those uses that produce the maximum possible total satisfaction for its people. In order for prices to allocate resources in this manner, they must reflect the value other people place on alternative uses of those resources. Whoever successfully bids away those resources thereby indicates he places higher value on them than other potential users. Any good microeconomics text contains an explanation of the way marginal cost pricing equates price to the value of its next highest use, or its opportunity cost. For example, Samuelson, Economics, New York, NY: McGraw-Hill Publishing, 11th ed., 1980, pp. 587-90.

The ability of prices of any one commodity to direct that commodity to its highest valued use depends on all markets for all goods setting price equal to marginal cost, a condition that real market economies never meet. When the condition fails, it is by no means true in general that marginal cost pricing for any single commodity improves social efficiency. See Lipsey & Lancaster, The General Theory of the Second Best, 24 REV. ECON. STUDIES 11 (1956). On the other hand, in the specific case of electricity, it is probably true that electricity prices set at the marginal cost of new supply would move our society closer to a socially efficient allocation of the resources that go into producing electricity. In fact, efficiency concerns might argue for pricing electricity above its marginal costs. See generally, the discussion in Alfred Kahn, The Economics of Regulation, vol. 1, New York, NY: John Wiley & Sons, 1970, pp. 195-98.

Whatever the problems of the second-best, one might well question whether social efficiency is the place to begin analysis at all. See Dworkin, Why Efficiency?, 8 Hofstra L. Rev. 563 (1981). The implication of the public service obligation model, of course, is that it might well not be. See text accompanying notes 22-30 below. Nevertheless, efficiency will play an important second-order role in almost any social ordering scheme, since once any set of basic objectives for society have been formulated, it will make good sense to achieve them in a manner that consumes the fewest resources necessary to do so.
the proper role of government (if any) in addressing such issues, each suggestion is controversial. One of the most interesting pockets of debate concerns the proper involvement of public utility companies in energy conservation, or in the job of unselling their traditional products. Though the very idea of an industry trying to discourage use of its own product may seem curious, the nature of regulatory oversight of the industry, as well as the strategic position of the industry, makes exploration of the possibilities practically inevitable.

A. CONSERVATION AS AN ALTERNATIVE TO EXPANSION

How can conservation be reconciled with the traditional functions of a utility, when a utility's "primary duty...is to serve on reasonable terms all those who desire the service it renders..."? Contrary to one's intuition, this duty to supply adequate service, an obligation which sets public utility enterprises apart from other industries, is not in conflict with conservation goals. Indeed, it strongly pulls utilities toward conservation programs.

One point about which there can be no controversy is that utilities must, at a minimum, be experts with respect to conservation expected to occur in response to market forces. A utility company aware of substantial and attractive conservation opportunities available to consumers of its product will need to adjust its forecasts and expansion planning to account for anticipated use of those opportunities. Failure to do so exacerbates forecasting error and produces idle capacity—a result no one wants.

But regulatory review of utility expansion plans quickly leads to more. Utilities in almost all states must justify their expansion plans before a regulatory body or bodies in order to receive a certificate of necessity and convenience authorizing construction expenditures, to defend the particular site and technology type before a land use regulatory commission of some sort, or to support requests for rate increases in order to attract necessary construction capital. A threshold

issue in most such proceedings is whether the expansion is truly "needed," an issue that can be fully ventilated only by analyzing the accuracy of the forecasts submitted by the utility and the alternatives to the proposed expansion. It has taken most regulatory agencies only a few years to appreciate that conservation measures are feasible alternatives to new construction, that they frequently cost less per kilowatt-hour than new construction, and that ratepayers care greatly about cost in times when new supply is more expensive than embedded supply.

In the first round of proceedings in which conservation was raised as an alternative to expensive new construction plans, the utility company's reply was simple. Its conservation projections were based on anticipated consumer response. On the basis of these projections, the utility simply argued that additional construction was still necessary. However, those projections left considerable cost-effective conservation energy untapped because of embedded-cost pricing and the absence of vigorous governmental stimulus. Common sense asked why the utility company did not use some of the money it wanted to spend on new construction projects to promote energy conservation. In that way it could meet projected demand growth and save money. This would be consistent with an important aspect of the utility's duty to serve, namely that it minimize costs consistent with its other responsibilities.\(^\text{13}\)

Utility construction planning can also be scrutinized ex post since, in order to be added to the utility's rate base, the facility must be "used and useful." For example, Kansas City Power & Light Co., 38 PUR 4th 1 (Mo. P.S.C. June 19, 1980) (exclusion of $157 million from rate base on grounds that capacity was unnecessary), rev'd Mo. PSC Case No. ER-81-42 (June 17, 1981). Much of the interest in conservation energy was stimulated by the increasingly intense reviews given to conventional powerplants pursuant to state legislation aimed at minimizing adverse land use and environmental effects of those facilities. See Schroeder & Wiley, State Facility Siting Legislation and Its Impact on the Siting of Coal-Fired Power Plants, unpublished report prepared for the U.S. Department of Energy, Assistant Secretary for Environment, 1977. A copy is on file with the authors.

\(^{13}\) For example, American Electric Power v. FERC, 609 F.2d 147, 3 SOLAR L. REP. 865 (1982), slip op. at 8, n. 26 (D.C. Cir. February 22, 1982), citing Texas E. Transmission Corp. v. FPC, 414 F.2d 344 (5th Cir. 1969). Cost consciousness finds expression as a fundamental goal of utility regulation in a variety of settings. Since rates are derived from costs, the obligation to supply service "at the lowest reasonable rates consistent with the interests both of the public and the utilities" [Cassidy, Public Utility Regulation in California, CAL. PUB. UTIL. CODE 3 (West 1956)], amounts to a duty to keep costs to a minimum. The authority of utility commissions to exclude from recoverable costs amounts spent in excess of that needed to supply current demand, or to exclude excessive investments from the rate base, gives the commissions a means of enforcing the cost minimization responsibility. See, for example, Darnell v. Edwards, 244 U.S. 564, 569-70 (1917); In re Centerville Water Co., P.U.R. C 318 (Cal. Pub. Util. Comm'n 1921); In re Campbell Bros. Water Co., P.U.R. C 330 (Idaho Pub. Serv. Comm'n 1921).
Once this chain of events and reasoning suggested the possibility of public utility company involvement in promoting energy conservation, the debate intensified. Even deciding what specific programs the debate is about generates disputes, since promoting energy conservation can mean anything from advertising to purchasing energy conservation devices and distributing them free to customers. Predicting the impact of promotional measures is more problematic than predicting the available capacity of a new generating station. Thus, purely instrumental questions as to how much conservation energy a given conservation program can actually produce—a question crucial to determining cost-effectiveness—abound. At bottom, the idea of a public utility company spending money to avoid producing more of its primary product remains curious, despite its logical relationship to the company’s primary duty.

Still, conservation has made such uncontrovertible good business sense to many utilities and such good political sense to utility commissions alert to the reaction of ratepayers to price increases that a number of utility companies have become promoters of conservation efforts. To a large extent, utility promotion activities have been confined to advertising and information transfer: making customers aware of the favorable impacts of conservation efforts on utility bills. Once load management programs—the shifting of energy consumption out of peak load periods of the day into slack periods—are added to information transfer programs, the vast majority of utility programs have been described.


Practically all utility conservation activities to date are much less aggressive than is necessary to mine the conservation resource to the extent that would be justified by cost-effectiveness considerations. Advertising and information transfer alone will prove unable to reduce substantially the lag in consumer response, since many impediments to market response are not information-related. Information transfer designed to appeal to customer self-interest will inevitably fail to capture all the conservation energy that is cost-justified from the utility perspective: consumers will not be interested in conservation that costs more than the average-cost based rates being charged. But a utility can reduce expansion expenditure whenever conservation costs less than the marginal cost of new supply. While the wedge between average and marginal cost will close over time, it is precisely the time lag in customer response to market signals that stimulates construction of new powerplants which are currently unjustified. Despite the ineffectiveness of information transfer, most utilities have little explored the possibilities of such measures as loans, rebates, and regulations. When more aggressive possibilities are raised, the controversy over the utility company's proper role stifles many initiatives.  


B. TRADITIONAL UTILITY ROLE CONCEPTS

Some of the reasons for the controversy flow from a deep tension between two very different conceptions of what the object of public utility regulation ought properly to be. One such conception, the natural monopoly model, holds the primary objective of regulation to be approximating the electrical production and distribution that would result from a competitive market for electricity, were such a market possible. This model focuses first on efficiency questions. The second idea, the public service obligation model, starts with the premise that the definition and provision of adequate service, including quantity and price, are public issues. As such, they should be resolved by recourse to underlying values, including a number of non-efficiency based interests. In this model, system efficiency still plays a vital, if subordinate, role since adequate service should be achieved in a cost-effective manner and because the efficiency concerns of customers can enter into the definition of adequate service through customer decisions to reduce electrical service if its relative costs become too high.

In general, programs involving utilities in extracting conservation energy are incompatible with the natural monopoly model, which conceives of electric companies essentially as private concerns that require public utility regulation only because effective competition cannot be achieved in the industry. Such programs are much more compatible with the public service obligation model, which views utilities fundamentally as agents for providing adequate service, as publicly defined.


19. See notes 22-30 and accompanying text below.
20. See notes 31 and 32 and accompanying text below.
21. Although there is a high degree of agreement among the many regulatory jurisdictions, both state and federal, on the issues discussed here, there is not unanimity. For example, although promotional rates were generally allowed in
Trying to sort through that entire corpus to identify all the ways the two are revealed, to analyze the merits of one model over the other, or to suggest resolutions of inconsistencies caused by the tension between them are all tasks for a different article. We are here burdened with a much lighter load. We shall attempt no more than to analyze three major objections to utility conservation programs based on general regulatory doctrine. These are: (1) that such programs would impair the utility's duty to serve and are thus impermissible, (2) that they unjustly discriminate against customers who do not participate in them, and (3) that they are beyond the regulatory jurisdiction of utility commissions to sanction or compel. This analysis will show that conservation programs of the kind being debated throughout the country are generally consistent with the fundamental laws and principles of public utility regulation. In other words, the public service obligation model dominates these three areas of regulatory development. First, however, a brief elaboration of the two concepts of the utility role may be helpful.

1. The Natural Monopoly Model

"The critical and—if properly defined—all-embracing characteristic of natural monopoly is an inherent tendency to decreasing costs over the entire extent of the market."22 In this circumstance, public policy based on efficiency should allow the industry to grow "naturally" toward single-firm supply of the entire market. In that way, society's demands for the product will be met in the most efficient manner. The electric utility industry has long been thought to possess important decreasing cost characteristics.23

But granting that a single firm might produce, transmit, and distribute electricity most efficiently in no way insures that it will do so. The natural monopoly will to the contrary lack the necessary stimuli of a competitive market for its services. Even more important in the evolution of public utility regulation, the monopoly will be able to use its times of declining costs, see notes 93-95 and accompanying text below, some states, such as North Carolina, regularly disapproved them. See also, the rulings at 70 PUR 3d 442; 70 PUR 3d 466; 54 PUR 3d 574; 54 PUR 3d 561; and 52 PUR 3d 469. More recently, some states have taken restrictive attitudes towards utility solar programs, while others have not. See note 18 above. Lack of total agreement should not be surprising, in light of the ongoing tension between two widely divergent conceptions of the roles of public utilities that are described in the following text. At the same time, the degree to which the analysis presented in the text represents a broad consensus is also striking.

23. For example, id., pp. 117-19, and authorities cited.
single-supplier status to interfere with the secondary markets dependent on its services through discriminatory services to favored or disfavored customers or through manipulation of rates. A desire to curb the excesses of monopoly power frequently dominated public sentiment for subjecting public utilities to public regulation.\textsuperscript{24}

The twin understanding that an industry exhibiting declining costs can operate most efficiently as a monopoly and that regulation may be necessary to prevent abuses of that monopoly power underlies the natural monopoly model. The assumption was that by avoiding wasteful duplication of facilities, promoting economies of scale, preventing monopoly profits, and supervising rates, regulation would result in the most efficient allocation of resources. This natural monopoly justification for regulation can be traced through many of the court decisions and much of the commentary on public utility regulation.\textsuperscript{25}

But the regulatory approach to natural monopolies has never been enthusiastically endorsed, even by adherents to the model. One particularly relevant reason for such grudging endorsement is the relative inferiority of regulation in stimulating innovation and improvements in the industry. Regulators can police industries to prevent the positively bad from occurring but may fail to ensure that the industry performs positively well. Such good performance may require pursuing ever higher efficiency, being progressive, taking risks, and innovating.\textsuperscript{26} In a time when innovative approaches to electrical supply and use seem imperative, such deficiencies can be particularly critical.

Traditional cost-of-service ratemaking can dampen or destroy incentives to innovate in several ways. Traditional regulation creates

\textsuperscript{24} See notes 55 and 71 and accompanying text below.

\textsuperscript{25} U.S. Supreme Court decisions of the early era reflect the natural monopoly model, as well as the struggle for supremacy between the two models. Compare Munn v. Illinois, 94 U.S. 113 (1877), and New State Ice Company v. Liebmann, 285 U.S. 262 (1932), employing the natural monopoly conception as one ground for decision, with the views expressed in New State Ice Company, supra, at 280-311 (Brandeis, J. dissenting) and Budd v. New York, 143 U.S. 517, 548-52 (1892) (Brewer, J., dissenting), which are consistent with the public service obligation model. The latter model, it can be argued, has consistently prevailed since Nebbia v. New York, 291 U.S. 502 (1934).

For example of commentator awareness of the natural monopoly arguments, see Henry Carter Adams, "Relations of the State to Industrial Action," Publications of the American Economic Ass'n, vol. I, 1887, p. 465:

There can be no question as to the line which marks the duties of the State. The control of the State over industries should be coextensive with the application of the law increasing returns....


barriers to entry, thus preventing competition from new producers with new ideas. Instead of replacing the spur of competition with something else, cost-of-service ratemaking reduces incentives to innovate still further by basing rates on a reasonable opportunity for return on the utility's investment. Under this system, if the firm improves its efficiency, whether through improved operating techniques or superior technology, it is denied any reward for that accomplishment in the form of supernormal profits. Instead, if costs or investments decrease, rates will be reduced so that the rate of return—the percentage profit allowed—remains the same. Finally, cost-of-service ratemaking creates the problem noted earlier of confronting customers with average instead of marginal prices, thereby reducing the incentive for consumers to search out superior substitutes.

Prospects for effective regulation seem even dimmer when regulators' actual behavior is examined, in the view of proponents of the natural monopoly model. This criticism of regulatory behavior, supported by a variety of arguments, is that regulators systematically fail even to make use of the tools they have at their disposal to promote innovation. In this view, regulatory commissions have lacked the competence or willingness to substitute their judgments for those of the utilitycompanies in ways that will promote improvements or dynamic performance in the industry.

So long as the industry was experiencing declining costs, the criticisms implicit in the natural monopoly model never quite amounted to a call for less regulation, or deregulation, of electric utilities. Given the twin premises of the model, better regulation seemed the second-best solution to the problems of natural monopoly and inferior regulation. Recently, however, the successes of airline deregulation and the

27. For a summary, see Stewart, The Reformation of American Administrative Law, 88 Harv. L. Rev. 1667, 1682-88, 1713-15 (1975). Although there are various theories to explain the failure of vigorous regulation, they share a general understanding of the problem, which has been articulated by one commentator (referring to the Interstate Commerce Commission):

Its functions are less those of a policeman and more that of a manager of an industry. The approach and point of view of the regulatory process begin to partake of those of business management. The commission becomes accepted as an essential part of the industrial system...The commission becomes more and more concerned with the general health of the industry and tries to prevent changes that adversely affect it. Cut off from the mainstream of political life, the commission's standards of regulation are determined in the light of the industry affected.


onset of deregulation in the telecommunications and natural gas industries have kindled an expansion of the natural monopoly model’s critique. Attention has been fixed on the generation component of electric utility operation, which has apparently lost the characteristic of declining costs across the extent of the market.\(^{29}\) The absence of declining costs in the generation component has been argued for some time.\(^{30}\) Now, growing empirical support for that position has been seized by those sufficiently confident to take it to its logical conclusion: the generation side of the utility business should be deregulated.

The impact of such a deregulated free market on conservation is not immediately clear. On one hand, conservation suppliers could meet demand at less cost than other bidders and might thus receive substantial new business. On the other hand, the regulatory process could remain biased against demand reduction. More significantly, without a regulated utility to develop conservation opportunities, there might be no qualified sellers.

In any case, deregulation of generation points in the opposite direction from utility-sponsored conservation programs. Proposals that would involve regulated electric utilities in energy conservation effectively expand the scope of regulatory review. Expenditures for utility conservation programs would have to be approved either as expenses or capital expenditures if the utility is to be entitled to compensation under regulated rate structures. Many such conservation proposals simply do not make sense under the natural monopoly model, since conservation expenditures lack the critical elements of declining cost and avoidance of wasteful duplication. It is only in the framework of the public service obligation model that such involvement gains legitimacy.

2. The Public Service Obligation Model

The critical distinction between this model and regulation based on ideas of “natural monopoly” is that the determination of what constitutes adequate service to customers is viewed as a public function. The


30. For example, Olds, \textit{The Economic Planning Function Under Public Regulation}, 48 \textit{AMER. ECON. REV.} 553, papers and proceedings (1958); See also, W. Jones, \textit{Cases on Regulated Industries}, Mineola, NY: Foundation Press, 2nd ed., 1976, p. 52, arguing that the inclusion of generation in regulation of utility monopolies was due primarily to the fact that utilities already owned the generation equipment when regulation was imposed.
natural monopoly model treats that determination as essentially a private matter, which requires governmental supervision only because the economic characteristics of the industry prevent market competition from operating effectively. In that view, the objective is to regulate in such a manner that the utility monopoly conducts its business as nearly as possible in the same way as would result from a purely private ordering of demand and supply. The public service obligation model is based on a different perception: the idea that private companies have been enlisted to discharge an obligation of society to its members. Adequacy of service, rather than economic efficiency, becomes the primary guide to regulation.

In the public service obligation model, such issues as adequate service and reasonable rates are envisioned to encompass a larger and more diverse set of concerns, including environmental quality, rate stability, maintenance of a healthy utility industry, and mediation of disputes between new and old customers when their interests diverge. All of these interests, and others, must be resolved or incorporated into the basic service and rate decisions according to the public interest as judged by regulators implementing statutory criteria. The result may bear only a coincidental relationship to the outcome of a hypothetical set of market transactions.

In the public service obligation model, transitions become times for mediation and management of the interaction between service and rates. This perspective directly illuminates the model’s view of utility conservation programs. If the utility is in a position to stimulate a cost savings measure which will assist in stabilizing rate increases, such a program immediately becomes a candidate for consideration by both the utility and the utility commission. The definition of “service” expands to mean the satisfaction of customer needs, not simply the provision of a commodity. If the freeing up of some of the product that is already being claimed by customers can result in better ability to satisfy additional

31. Some of these concerns can be grafted onto the natural monopoly model, at least in theory, through the standard use of externality analysis. The environmental effects of power production, for example, are recognized as part of the social cost of electrical generation. Creating some means to reflect those costs in an otherwise competitive market can be accommodated by the natural monopoly model as a complementary device to achieve its primary objective, the socially optimal level of production. See, for example, the decision of the California PUC, holding that cost-effectiveness comparisons between conservation energy programs and new production must include the full marginal environmental effects of developing and producing new energy. Re Southern Edison Co., Decision No. 92549, App. No. 59351 (Cal. Pub. Util. Comm’n, December 30, 1980). But other concerns are not easily conformed to the natural monopoly model, since they strike against even attempting to duplicate market dynamics. See text following.
customers, that freeing up process, the unselling of the product, is a perfectly legitimate means to fulfill the service obligation. Indeed, if unselling is the less expensive choice, it may be required because it constitutes superior service. If the utility is unwilling or unable to provide the new service, the regulator may well be free to consider other possible providers.

Once any given set of objectives has been determined as constituting the public service obligation, that obligation will be most successfully fulfilled if it is pursued in the most efficient possible manner. The better the utility system is at producing power at low cost, for example, the further it can advance the policies underlying lifeline rates without inducing customers who can to switch to alternatives. Efficiency, in the sense of the most cost-effective pursuit of a predefined objective, should thus be an indispensable part of any policy under the public service obligation model. The difference is that efficiency becomes relevant to the determination of means and is not, in the first instance, dispositive of the question of ends.

3. Effect of Divergent Roles on Conservation Programs

The foregoing is intended only as a partial description of two competing views of the objectives of utility regulation. As we noted above, elements of both models have influenced the evolution of utility regulation. In no small part, the development of utility involvement in energy conservation in the next few years can be tracked through an assessment of which model enjoys current dominance. The legal challenges raised to utility conservation programs are but one manifestation of the struggle between the two views.

These legal objections in utility conservation programs cast a substantial cloud over such activities. Legal issues have been raised by utilities resisting orders to undertake new activities; by industries concerned about the effect on their rates; and, in a few cases, by low-income groups concerned about the availability of program benefits to the poor and the allocation of costs. Legal issues have also been raised as a defense where environmental groups have presented conservation programs as an alternative to completion of new powerplants. The

32. See, for example, notes 146-54 and accompanying text below.
33. For example, General Motors Corp. v. PUC, S.F. No. 24303 (Cal. Supreme Court, filed May 16, 1981).
34. For example, 3 Solar L. Rep. 404 (1981) (consumer group challenge to California solar subsidy program denied).
effect of this litigation is undoubtedly to discourage already reluctant utilities and regulatory commissions from initiating such programs, to cause uncertainty in the minds of possible participants, and in general to slow the development and implementation of the entire concept.\textsuperscript{36}

One of the most highly publicized programs, offered by Pacific Gas & Electric, illustrates the problems being experienced. The weatherization program, called "ZIP" for zero-interest loan program, was proposed by PG&E on March 25, 1980, and approved by the California Public Utility Commission on January 28, 1981. The order was challenged by TURN, a consumer group, and by General Motors. The California Supreme Court has discretionary review of PUC orders and declined to hear the case. In July 1981, PG&E asked for an increase in rates to implement the program statewide. Hearings were held on 47 subsequent days, producing a transcript of 5,600 pages and a new order approving the program.\textsuperscript{38} TURN again followed with a request for rehearing and an indication it would bring suit, whereupon the utility announced it was suspending the program due to legal uncertainties.\textsuperscript{39} The PUC waited less than a week to order PG&E to reinstate the program, which it did promptly.\textsuperscript{40} As of March 1, 1982, more legal challenges appeared likely. This kind of controversy and uncertainty is very likely a barrier to more widespread and rapid development of utility energy conservation programs.

The remainder of this article is devoted to demonstrating that three major types of these legal challenges—those based on duty to serve, on

\textsuperscript{36} This \textit{in terrorem} effect is important because no amount of theorizing can replace the insights into the competing models that might be produced by a little empirical testing. For instance, it is clear that all the possible arguments in favor of the public service obligation view of regulatory responsibility could be overwhelmed by a conclusion that regulatory commissions lack competence or willingness to regulate properly.

The criticisms of regulatory behavior are powerful, but are largely based on observations of prior bad acts. Forecasting future behavior on that basis can never be totally reliable. Recent experience with agencies such as the Environmental Protection Agency may demonstrate that it is possible to empower a regulatory agency to deal with wide responsibilities without that agency inevitably being captured by its regulatory clients. It is conceivable that a regulatory agency intent on pursuing the most cost-effective means of meeting consumer service needs, including, where appropriate, utility conservation programs, would produce a more commendable record than the orthodox pessimism would suggest. Unless regulatory agencies feel free to experiment with such programs, we will never know.

\textsuperscript{37} California Public Utilities Commission, Decision No. 92653 (January 28, 1981).
\textsuperscript{38} California Public Utilities Commission, Decision No. 93891 (December 30, 1981), p. 3.
\textsuperscript{39} \textit{Energy Daily}, February 24, 1982, p. 1
\textsuperscript{40} \textit{Id.}
unjust discrimination, and on jurisdictional limitations—are largely unfounded.

IV

THE UTILITY'S DUTY TO SERVE

While most doctrinal objections to utility involvement in energy conservation programs can be derived from the natural monopoly model, the first objection we will examine is actually based on an inaccurate interpretation of one of the concepts underlying the public service obligation view of utility regulation. It is the claim that the utility's duty to serve, which it acquires along with its franchise, constrains the utility's ability to pursue energy conservation. In this interpretation, the duty to serve is nothing less than a "legal responsibility to supply electricity...to all customers in the utility's area no matter what the peak demands may be. This responsibility to meet all demands has led to all utilities building in reserve capacity to meet any unexpected outages, maintenance, or extra high demands." As a consequence, the utility is sometimes said to be obligated to grow along with its service territory's demand for electricity, rather than to conceive schemes to reduce that growth. "This requirement, that growth be served, is part of a 'public utility responsibility,' the chief element in the regulation of public utilities."

Such a view of the duty to serve can have several implications for conservation energy programs. It might be taken to mean that a utility company's responsibility is strictly limited to serving customer demand for electricity with electricity. This problem is addressed in the discussion of jurisdictional issues below. It might also be interpreted to mean that the utility company is compelled to serve any and all demand that

might arise within its territory. Under this view, the utility would be precluded from balancing the merits of providing electrical service against alternative methods of meeting that demand (such as cost-effective conservation programs) or against competing values (such as maintaining rate stability). It might also suggest a requirement that the forecasting process be biased in favor of electrical demand growth in order to ensure that sufficient capacity is continually on hand to discharge the utility’s duty to serve.

A presumption in favor of capacity growth would adversely affect implementation of conservation energy programs in two ways. First, in times of high forecasting uncertainty, it would dictate erring in favor of forecasts that were substantially higher than more cautious estimates. Second, once overcapacity is built, improvements in energy efficiency are disfavored because it is frequently (though not always) less costly

44. We will sometimes refer to actions that the utility can undertake under public utility regulatory principles and sometimes to actions that the public utility commission can compel the utility to undertake. In cases of utility action, it should be understood that the public utility commission superintends the kinds of utility decisions being analyzed, so that in important respects the utility is not the final decisionmaker. In general, the types of doctrinal objections that are the subject of this article are taken to be, if they are valid, constraints on both the utility and the utility commission.

45. Failure to adjust expansion plans for conservation has contributed to the current overcapacity within the industry. In 1969, the industry-wide gross peak reserve margin was 16.6%. By 1979, that figure had grown to 36.3%, far in excess of that required for even the most cautious reliability standard. Electrical World, vol. 194, September 15, 1980, p. 66. The expense of carrying unused facilities exacerbates the shaky financial status of some companies and raises the possibility that some commissions might find that idle capacity is not “used and useful” in the service area, a finding that would result in refusing to allow the company any return on capital investment in such facilities. See note 12 above.

Failure to adjust cannot be attributed to industry stupidity. Energy consumption estimates generally have been fluctuating wildly since 1973, albeit in a secularly downward direction. The downward movement has been so dramatic that one year’s widely unrealistic low forecast becomes next year’s conventional wisdom. See Science, vol. 208, June 20, 1980, p. 1353. The forecasts, furthermore, show little sign of converging, even among forecasters sharing some central assumptions. Four estimates by the Audobon Society, the Carnegie-Mellon Institute, the Solar Energy Research Institute, and Ross and Williams vary from 62 quads to 88 quads in the year 2000, a divergence of 42%. See Science, vol. 212, April 24, 1981, pp. 424-26. Current consumption is about 80 quads. Other estimates are much higher: the official DOE report to Congress estimates 102 quads, and the Edison Electric Institute’s forecast is 117 quads. Id.

In this atmosphere, it is inevitable that some utilities are going to choose forecasts that turn out wrong. The problem is made dramatically more serious, of course, when one is attempting to forecast far into the future. The short lead time for demand-reducing, least-cost programs, as well as some supply-enhancing alternatives to new central station supply, is an important argument in favor of employing them. See, for example, Energy Services Corporations, note 15 above, pp. 14-18, 43-79.

46. See note 5 above.
to stimulate demand for idle capacity than it is to adopt efficiency measures, even though energy efficiency would have been less costly had it been compared with new capacity in the first instance.

Historical investigation of the “duty to serve” doctrine does not support an unyielding edict that “growth be served.” Both the common law duty to serve, some elements of which were adopted in subsequent state regulatory statutes and decisional law, and the early understandings and construction of state regulatory statutes themselves run to the contrary. Under the supervision of utility commissions, utilities are supposed to make wise decisions, both as to the amount and the type of any expansion. The public service obligation of utilities affects the interests they must consider in making those decisions, but in ways that provide strong foundations for conservation energy programs where sound analysis finds them warranted.

A. THE COMMON LAW DUTY TO SERVE

The nineteenth century common law recognized the strategic position occupied by certain services, primarily common carriers and innkeepers, and imposed upon those enterprises a “duty to serve.” The core responsibility imposed by this duty was to make facilities available to all comers without discrimination at a reasonable price. The duty was “a vestigial remain of English doctrines which originally had been applied

47. This article is concerned about the lawfulness of a deliberate choice to pursue a strategy other than traditional central station expansion, on the basis of reasonable information and judgments about otherwise anticipated demand, reliability of alternative programs, customer reaction, and so forth. This analysis says nothing about the consequences of a utility undertaking an express or implied contractual obligation with a customer or group of customers that it subsequently breaches, nor about the consequences of the negligent performance of an act it had agreed to undertake or was held by law to be responsible for undertaking. Generally, a utility will be held to its contractual obligations (under ordinary contract principles) and will be held to a duty of reasonable care (under ordinary negligence principles). See generally, Annot., “Liability of Electric Power or Light Company for Interruption, Failure, or Inadequacy of Power,” 4 A.L.R. (3rd ed.), 1965, p. 594; National Food Stores, Inc. v. Union Electric Co., 494 S.W.2d 379 (Mo. App. 1973) (failure to give reasonable notice when utility had time to do so and had reason to know failure to do so would result in loss to specific customer); Monolith Portland Midwest Co. v. Western Public Service Co., 142 F.2d 857 (10th Cir. 1944) (specific contract governs rights and liabilities of the parties); Coal District Power Co. v. Katy Coal Co., 141 Ark. 337, 217 S.W. 449 (1919) (contract between parties imposed absolute duty to provide power). Although some of these cases refer to a “duty to serve,” liability is in each instance based on a specific undertaking by the utility, not on the alleged general obligation to grow analyzed in the text.
to all businesses serving the general public." It rested upon the consumer's lack of readily available alternatives at the time of the request for service and the resultant potential that public enterprise operators could charge extortionate rates to particular customers, or harm the customer by refusing to serve.

This common law duty proved almost impossible to enforce, a failing that was one impetus for the eventual passage of federal laws regulating the railroads and, later, electric utilities. Unenforceability, except as it led to the creation of regulatory strictures, is tangential to the main point here: The doctrinal content of the duty to serve at common law never included an obligation to grow. Rather, the duty was to provide nondiscriminatory and reasonably priced access to whatever facilities the enterprise had at the time demand was made.

An obligation to expand and an enforceable requirement that "growth must be served" would have been almost unbelievable at common law. Creating such obligations would require use of the mandatory injunction as a remedy—an injunction dictating affirmative conduct by the utility extending some time into the future. Injunctive relief was, of course, entirely unavailable at common law. Equity courts, which did have injunctive remedial powers, were generally reluctant to enter mandatory injunctions, even in cases where the equity court could properly assume jurisdiction. Further, the requirements of showing "irreparable injury" and the "inadequacy of legal remedies" in the typical commercial situation in which such duty to serve issues would arise presumably would have restricted such jurisdiction. Finally, it seems likely that showing irreparable injury would have required showing a present demand for service, or one reliably about to occur, a far cry from worst-case planning. It is therefore absolutely no surprise that the common law duty to serve did not include any obligation to grow, let alone an obligation to plan for a worst-case growth projection.

Thus, in Lane v. Cotton, an early case describing the obligations of a common carrier, the court stated that "the innkeeper...[is] obliged, while he has room, to let in all travelers...if the inn be full, ... the action would not lie for such refusal...." American cases reflect the same ideas. In McDuffee v. The

50. Id., p. 1337 [emphasis added]. Similarly, from a 1623 Anonymous case reported by Wyman: "An action upon the case lyeth against an innkeeper who denies lodging to a traveller for his money, if he hath spare lodging, because he hath subjected himself to keep a common inn." Wyman, Cases on Public Services Companies, 1909, p. 127; Accord Jackson v. Rogers, 2 Shower 327 (1683).
Portland and Rochester Railroad, the court found sufficient substance in the duty to serve to hold for the plaintiff when the defendant failed to furnish terms, facilities, and accommodations for plaintiff's express business reasonably equal to those furnished to the Eastern Express Company. That did not, however, imply an obligation to expand those facilities to make them available to the plaintiff. “A common carrier of freight cannot exercise an unreasonable discrimination in carrying for one and refusing to carry for another, [since] a common carrier is bound by law, if he have conveniences for the purpose, to carry for a reasonable compensation.” Similarly, the United States Supreme Court has noted that a public carrier is “one bound to furnish transportation to the public as a common carrier, [who] must serve all, up to the capacity of his facilities, without discrimination and for reasonable pay.”

Frequently, absence of any claimed right to impose expansion on the carrier has been so clear that lack of an obligation to expand could be left unstated in the cases. Still, the renderings of the Court are entirely consistent with our analysis. The Court has said that “Common carriers ...are performing a public service....As a consequence of this, all individuals have equal rights both in respect to service and changes.” To this we could add, so far as the common law duty to serve is concerned, “and no other rights.”

B. PUBLIC UTILITY REGULATION

With the advent of comprehensive public utility regulation, the duty to serve might have expanded to include a worst-case planning element. Such regulation conventionally carries with it an exclusive franchise for the utility company. Conferring a governmentally protected position might be sufficient to support a reciprocal obligation of the utility company to grow with the community it has been given the exclusive right to serve. In this way, the limitations on the common law duty to serve might have been stripped away by the further intervention of government in the business of the regulated entity.

51. 52 N.H. 430 (1873).
52. Id., p. 448 [emphasis added]. Other state court decisions are in agreement. Pullman Palace-Car Co. v. Lawrence, 22 So. 53, 57 (Miss. 1897) (Pullman car company, like innkeepers, “under obligation in all proper cases, and to the extent of their ability and capacity,” to supply accommodations); Northern Ohio Tel. Co. v. Putnam, 164 Ohio St. 238, 245, 136 N.E.2d 91, 116 (1955) (telephone company “bound to serve to the extent of its capacity”).
The creation of a specialized commission empowered to monitor and enforce the duty to serve eliminates institutional incompetence as a reason not to impose on the utility an affirmative obligation to grow. While common law and equity courts may have, for various good reasons, been reluctant to require expansion, the commission, with its distinct charge to ensure that the public interest in nondiscriminatory service is being discharged, would be much more able to enforce that obligation.

Indeed, the asserted obligation to grow seems tightly linked to the duty to provide nondiscriminatory service under certain demand conditions. It was concern over discriminatory rates and service that fueled early drives for regulation.\(^55\) Once demand has grown to the extent that the utility is operating at full capacity, failure to expand to accommodate additional demand requires recourse to one of two palliatives. The utility could simply close its doors to any additional customers, operating on a first-come, first-served basis. In such cases failure to grow would become the justification for a total refusal to serve, which is the most severe type of discrimination imaginable.

Alternatively, the utility could initiate a rationing scheme to accommodate all individual customers, each at some fraction of his or her full demand. But rationing simply restates a certain kind of discrimination in service. Though each individual customer is being served in some sense, some customers will have available more palatable alternatives for that portion of their requested demand that is no longer satisfied by the utility. Those who can ill afford the best substitute will be treated less well, in a real sense, than those who can. The portion of demand that is served cannot compensate for the portion that is not: differences in customer ability to compensate for the unavailable portion can result in hardship equivalent to complete refusal to serve.

\(^{55}\) One of the most complete, early expositions of the arguments favoring regulation of utilities is found in the debates and reports preceding the Interstate Commerce Act of 1887. These indicate that Congress believed, and in this was echoing public sentiment, that “the greatest evil chargeable against the management of the transportation system of the United States” was “individual favoritism,” a charge that could be made against any industry exercising monopoly power. Colm Committee Report, 49th Cong., 1st Sess., Sen. Rep. 46 (1896), reproduced in Schwartz, *The Economic Regulation of Business and Industry*, vol. 1 New York, NY: Chelsea House, 1973, p. 70 [hereinafter cited as *Colm Report*, with page references to the Schwartz republication]. See also, Jones, note 30 above, p. 226, and note 71 and accompanying text below. Where there is an interest in favoring some customers over others, discrimination in service would be effectively camouflaged by maintaining inadequate capacity to serve all who demanded it. The generally pro-growth attitudes of the public in the later 1800’s might also lead one to conclude that government meant to extract a growth requirement from the utility companies. In fact, as the discussion in this section shows, what government wanted was a means to oversee sensible growth.
Thus at this initial level of analysis, the most attractive means to avoid discrimination in service—the evil at which early regulation was primarily aimed—is to expand. The institutional competence of the administrative agency would appear to be all that is needed, beyond the nondiscrimination rationale, to justify an obligation to expand as a part of the duty to serve.

This analysis correctly reflects the perspective of new customers, who will uniformly desire service on terms no worse than those available to existing customers. Further, in a period of the country’s development in which improved infrastructure would most likely have beneficial growth-stimulating effects, a pro-growth policy translated into a bias in favor of expansion might also promote valid social objectives. Finally, in a period of the industry’s development in which declining costs were the rule, expansion furthered the interests of both existing customers and investors in utility bonds and stocks.

But no iron law ever guaranteed that all these legitimate interests could be furthered by a single growth policy. Central station expansion can put those interests at loggerheads in several ways.

First, once marginal costs begin to exceed existing rates, expansion results in rate increases. This threatens existing customer expectations, nurtured by years of utility promotion. It also reverses the effects of regulatory lag: what was once financially favorable to the utility is no longer so. If, once rate cases are convened, utility commissions respond to customer pressure to resist full rate increases, the effects become even more severe. Second, uneven growth or uncertainty in the rate of growth in service can place these interests at odds. Central power increments are extremely lumpy, coming perhaps 500-800 megawatts at a time for coal-fired facilities and in somewhat larger amounts for nuclear plants. If one of these jumbo units is built in expectation of a growth in sales that does not materialize, existing sales have to support the carrying costs of the idle capacity, a situation that leads to rate increases, inadequate revenues, or both. While central station strategies based on smaller units might solve some of the uncertainty problem, these units are less efficient than their jumbo brothers. Thus marginal costs of new supply would be higher for the electricity produced.

 Discord among the interests of various customer groups, the utility, and its investors has reached crescendo in the past decade. A cost-effective strategy including conservation programs can be an attractive means of reducing these conflicts. If the duty to serve overrules such programs, it must be because utility commissions were not established with sufficient authority and discretion to minimize such conflicts.
That conclusion would run directly counter to the evidence. From the very earliest moments of concern about utility company excesses, the public and their legislatures understood that there were potential conflicts between those wanting growth and the legitimate interests of others. Long periods in which such conflicts were relatively minor in scope and duration should not obscure the real power of utility commissioners to mediate the conflicts when they did occur. Expansion has been, and should be, judged by its consequences for the entire set of interests affected by the decision. If expansion adversely affects some competing interests, or if alternatives exist which can better accommodate the conflicting concerns, the utility commission can reject central station expansion. As the Utah Supreme Court concluded in upholding a town's refusal to extend water service, finding an unyielding duty to serve in the presence of such adverse effects would mean

that the Town Board, acting for the town, is legally bound to supply...all its inhabitants, no matter how ruinous and destructive the result might be. The unsoundness of this contention is easily demonstrable.56

Such a demonstration can draw evidence even from the earliest days of utility regulation.57

Railroad regulation supplies the earliest records on these expansion issues. For example, in the 1870's, the Massachusetts Board of Railroad Commissioners operated for several years under a statute that required the Board to "fix" rail routes in the event a community and the railroad company could not agree.58 The Board originally interpreted this language to require it to approve at least one route, even though opposition might be strong and even where the Board thought expansion to be

56. Rose v. Plymouth Town, 110 Utah 358, 173 P.2d 285, 286-87 (1946). The point at which the addition of new customers would cause necessary injury to existing customers is "not always easy to determine...The matter is one of judgment, a judgment which it may well be should be exercised conservatively, but a matter of judgment nevertheless." Swanson v. Marin Municipal Water Dist., 56 Cal. App. 512, 128 Cal. Rptr. 485, 522 (1976). That judgment, furthermore, is vested in the sound discretion of the utility commission. See notes 80 and 81 and accompanying text below.

57. The early experience of railroad regulation is pertinent to the later development of electric utility regulation because legislation and case law developing the latter drew on the knowledge gained from experimentation with the former. See note 64 below.

unnecessary. After several years' experience with the statute, the Board urged the legislature to provide for a determination of "the exigency for a road before a route can be granted." The Board had quickly realized that factors other than the railroad companies' willingness to build and the service which could thereby be provided to additional customers were relevant to assessment of expansion requests. The legislature responded by amending the statute in 1882 to require board certification of public convenience and necessity before expansion could go forward.

One of the first cases decided under the amended statute illustrates the conflicting interests that early commissions confronted in certifying expansion. In 1888, the Board rejected a petition to extend a railroad into a resort area when the peak seasonal demand exceeded the capacity of existing transportation service, comprised of a street railway and a barge line. The Board concluded that both the street railway and the railroad "could not be supported by the present business nor by any business which is likely to arise for many years to come." Thus expansion, albeit backed by a demand for service, would have had an adverse financial impact on existing transportation companies and their ability to provide service.

In another case, the Board decided between two competing applications to provide service. It chose the one which required the least amount of new construction and which would not inject competition into the rail system, even though the rail service would thus be more circuitous.

These two cases take an analytical approach identical to the one that leads to conservation energy proposals today. In the first, the Board fully considered the consequences of expanding the railroad system. It concluded that people relying on existing service would be hurt by expansion. In such a circumstance, it was within the Board's power to deny certification, even though a demand for service would thereby go unmet. In the second, the Board assessed alternative expansion courses with a view toward their differing effectiveness in meeting legitimate interests. It chose one that reduced the disruptive consequences of construction, even though the service provided was less direct. The Board concluded that the benefits of more direct service were insufficient to warrant incurring the adverse effects of the more direct route. Under the facts these cases presented, the Board had the authority to direct the action that best accommodated conflicting interests, including the authority to deny expansion plans altogether.

61. Id., p. 158.
62. Id.
The earliest federal records also reflect an awareness that legitimate arguments against expansion can be present from time to time, and that weighing these arguments is just as important as expansion. The Collum Report, which preceded the Interstate Commerce Act of 1887, articulated this understanding of current railroad operations:

Not only have the expenditures upon such uncalled-for lines [i.e. those that the traffic would not “legitimately support”] robbed investors of their legitimate profits upon investments previously made in the lines pursuing this policy of reckless extension, but the addition of every unnecessary road has imposed unjust burdens on the public.

It cannot be claimed that there is any obligation on the part of the community to support an unnecessary road, but when once it is put in operation and fastened upon the public it will contrive thereafter to live at its expense. It is contended by railroad men that in such cases the loss fall entirely upon the railroads; that there is only so much business to be carried, that competition keeps the rates down, and that even where the business is divided and carried at greater expense the people pay no more than before.

This may be partially true, but the fact still remains that the construction of every new road imposes an additional burden or tax upon commerce for its maintenance, and the people have a right to demand protection against the imposition of such a burden without any benefits being conferred in return by way of compensation....

While the addition of a line that is not needed may not, perhaps, result in higher rates being charged, it is none the less a burden upon the community if it increases the cost of operating lines previously existing, and thereby prevents them from providing improved facilities or from making the reductions in rates which the public would otherwise be entitled to secure as business increased.63

The Committee saw clearly that expansion was not inevitably an unmitigated blessing. It could disproportionately burden commerce, whether by increasing rates or by preventing improvements in service or reductions in rates. The interests of the public and existing customers

were not simply to be trampled on wherever there were expansion demands.\textsuperscript{64}

The case law dealing with expansion controversies, from the early years on, also clearly shows the commission’s task to be one of weighing competing and equally worthy interests. There is no manifestation of an

\textsuperscript{64} Despite the perceptive analysis of the Collum Committee and the early recognition of the potentially adverse impacts of expansion, the initial federal legislation addressing the “railroad problem” did not devolve upon the Interstate Commerce Commission powers sufficient to address these issues. Until the Transportation Act of 1920, Pub. L. No. 152, 41 Stat. 456, the ICC was without jurisdiction over matters of service, facilities, and expansion of railroads. Indeed, what powers the Commission might have been thought to have to address rates were reviewed hostilely by the Supreme Court in the beginning. For example, in the \textit{Maximum Freight Rate} case, the Court held that the ICC had no power to set rates after finding carrier rates not just and reasonable. ICC v. Cincinnati, N.O. & T.P.R. Co., 167 U.S. 479 (1897). This left the ICC with only the power to review seriatim rates submitted by the carriers. Similarly, in ICC v. Ala. Midland Ry. Co., 168 U.S. 144 (1897), the court held that competition from another regulated railroad was sufficient basis for a regulated carrier to be exempt from the long- and short-haul pricing restrictions in the Act. As a result, the ICC was without authority to redress one of the major pricing discrimination tactics prompting the original legislation.

The interplay of several forces explains the cautious nature of the original legislation. First, specialized administrative commissions were relatively untested in this country and unknown on the scale proposed for the ICC at the federal level. Sharfman, \textit{The Interstate Commerce Commission}, vol. 1 (Harper Ed. 1969), pp. 11-13. Congress may have been wise to gain some operating experience before proceeding further. Second, some constitutional doubts about more aggressive legislation had been raised. \textit{See, for example, Kolko, Railroads and Regulation}, Westport, CT: Greenwood, 1965, p. 35. Third, the still dominant laissez-faire philosophy counseled little interference with private companies which, up to this point, had been tremendously subsidized and supported by governments wanting to stimulate construction of the commercial bloodlines of the country. As the Collum Committee fully knew, “the question [in the beginning] was how to get railroads, not how to control them.” \textit{Collum Report}, note 55 above. Although the Granger movements and growing recognition of the needs for some controls had challenged the practices of the companies, Congress may have been moved to enact the minimum legislation it thought necessary to deal with the most important problems. Finally, state commissions still continued to exercise some control over service and expansions.

Whatever the explanations, caution produced legislation soon found “to be restricted in scope and feeble in effect.” Sharfman, this note, p. 23. In the early 1900’s Congress began to augment the power and authority of the Commission in a series of amending acts. These bills generally gave the ICC findings greater finality and larger scope to address problems raised by railroad growth and operation. \textit{See generally, id.}, pp. 11-244. They culminated in the Transportation Act of 1920, the basic contribution of which “lay in the statutory recognition of a positive public responsibility, in the exercise of the Commission’s regulatory functions, toward the establishment and maintenance of an adequate transportation service.” \textit{Id.}, p. 177. The legislation formalized and sanctioned the sentiment that adequacy of service was at least as important as reasonableness of rates, that controls on service facilities were necessary to support any ratemaking policy, and that both implied a need to “curb[] unwise or extravagant extensions, not only as
unswerving bias toward growth.65 "The need and cost of a service extension, the expected return, the effect upon the company's revenues, and the advantage the public will derive are factors which enter into a determination of the reasonableness of a demand for an extension of electric service."66 In their application of this general pronouncement to an independent safeguard against dissipation of finances and impairment of service, but by way of support to the new rule of rate-making...." Id., vol. 3, pp. 323-24.

State legislation to regulate electric utilities was able to benefit from the experiences of both state and federal railroad commissions. Behling, *Competition and Monopoly in Public Utilities*, 35 Univ. Of Ill. Bull 1, 25-26 (1938). Electric power was virtually an experimental industry until after 1910, and major state regulatory legislation was not passed in most of the states until the 1910-20 era. See Jones, note 30 above, p. 67. By the time major electric utility regulatory statutes were being enacted, most commissions were infused with powers commensurate with the broadly understood purpose of their task, namely "to assure the furnishing of adequate service to all public utility patrons, without discrimination, and at the lowest reasonable rates consistent with the interests of the public and the utilities." Cassidy, *Public Utility Regulation in California*, Cal. Pub. Util. Codes (West 1956), quoted in Priest, note 41 above, vol. 1A, p. 3.

65. Some cases contain language suggesting a spirit or an inclination in favor of growth. See, for example, *Re Public Service Electric & Gas Co.*, 28 PUR 3d 155, 156 (N.J. 1959); *Piscataway Fire Comm'rs v. Elizabethtown Water Co.*, 27 N.J. 192, 142 A.2d 85 (1958), both stating that it would be against the spirit of the New Jersey statute authorizing the commission to order extensions to impose a general requirement of advance deposits on residential applicants for service. This pro-growth spirit is justified and entirely consistent with the thesis of this article, so long as the utility's overall rate of return is not adversely affected and so long as rates to existing customers are not increased to cover the additional revenue needs produced by the extension. The first of these prerequisites is usually explicit in the opinions, while the second is implicit in their logic. The cases generally fail to treat the possibility of rate increases at all, presumably because it was never contemplated as an option. See, for example, 28 PUR 3d at 156, 142 A.2d 85. Occasionally, both are made explicit. For example, *KurkJian v. Lakewood Water Co.*, 13 PUR 3d 628, 629-30 (N.J. 1956) ("The criterion is the overall return to the utility. An extension that does not bear its fair share of the entire return would necessitate an increase in the costs to all the other users of the customer's services.") Central station expansion under the current state of affairs cannot take place while both these prerequisites hold true. Either the rate of return must suffer when new supply is added at a cost greater than that recaptured through rates set below marginal cost, or rates must be increased, or both.

66. *Cedar Island Improvement Ass'n v. Clinton Electric Light & Power Co.*, 142 Conn. 359, 9 PUR 2d 184, 114 A.2d 535 (1955). Numerous extension cases recognize the mutual interest customers have in each other's service and rates and the material interest of existing customers in the extensions a utility makes. *For example, Water, Gas & Electric Co. v. Beloit*, 9 Wis. R.C.R. 250, 258 (1912) ("to be just and effective...[extensions] should be made with due regard for the magnitude of both the investment necessary and the probable additional earnings to be gained thereby, including the return on the additional investment."); *Sigrist v. Public Service Co.*, PUR 1915A, 1024 (extension request denied because "not reasonable or practicable, [and because it] would [not] furnish sufficient business to justify its construction and maintenance"); *Schussler v. Commerce Comm'n*, 410 Ill. 289,
particular cases, commissions are not constrained to favor one interest or the other. They can decide that the extension of service should "not unduly burden existing customers;"67 but they can also order extensions, "even though the result may be an increase in rates to other subscribers,"68 and they can require extensions of utility service even where they may be less profitable than the rest of the service for a time, so long as the utility business maintains overall profitability.69 Within that general framework, the commission is charged with the responsibility to adjust competing interests, and the courts "are without authority to substitute [their] views of what may be reasonable or wise...."70

This general framework provides ample authority for commission denials of expansion plans in favor of cost effective conservation programs. The utility's duty to serve thus does not present an obstacle to pursuit of that course.

IV
UNJUST RATE AND SERVICE DISCRIMINATION

When public sentiment for placing public utility companies under public regulation first stirred, utility manipulation of prices and services to the benefit of the favored and the potential ruin of the disfavored was considered the "paramount evil" requiring regulation.71 Since that time,

292-93, 102 N.E.2d 101, 103 (1951) (commission refusal to order extension upheld with observation that commission must consider not only the desires of the persons to be served, but also the gain or losses involved, the number of persons to be accommodated, the facilities of competing transportation companies, the volume of business, and other relevant factors. "[A] public necessity is not shown where the operation of the service in question would entail large losses and substantial alternative means of transportation are available in the territory to be served."); Langan v. West Keansburg Water Co., 25 PUR 3d 508, 142 A.2d 185 (N.J. 1958) (commission refusal to order extension upheld, with court noting that the commission should consider the following criteria: whether the public necessity and convenience require an extension; whether such an extension is reasonable and practical; the effect of the return reasonably to be anticipated from the extension of the facilities upon the companies' overall return; whether the financial condition of the utility reasonably warrants the original expenditures for the extension.) See generally, Priest, note 41 above, vol. 1, p. 235.

68. General Tel. Co. of Wisc. v. PSC, 54 PUR 3d 210, 213 (Cir. Ct., Dane Cty., 1964).
69. For example, Atlantic Coast Line R. Co. v. North Carolina Corp. Comm'n, 206 U.S. 1, 23-27 (1907).
70. Id.
commissions and courts have regularly sought to ensure that unjust discrimination in rates or service did not creep into rate structures. Unjust discrimination claims are routinely raised against conservation energy programs.

It is commonplace that some discriminations in service and rates have always been permitted (and even required), provided that they can be justified by circumstances considered pertinent to their establishment.\textsuperscript{72} The core of an inquiry into an unjust discrimination claim thus is determining what constitutes an adequate justification for differences in treatment. It is an understatement to say that the answer to this question, as found in the case law, is in a state of disarray.

\textbf{A. THE UNJUST DISCRIMINATION DOCTRINE}

Leading commentators on utility regulation have conceded the fluidity of the unjust discrimination doctrine. Priest concludes that “there is no established rule of thumb by which to determine whether conditions of service are similar or dissimilar when unreasonable discrimination is sought to be established.”\textsuperscript{73} Bonbright attempts to articulate an economist’s understanding of the concept, but can do no better than concluding that “a certain amount of discrimination” is “unavoidable,” and that the law should attempt to “outlaw, or minimize those price relationships which have a serious distortion effect on relative use of services,”\textsuperscript{74} hardly a prescription for crisp resolution of disputes. Courts are no more precise. The Supreme Court of Maine, for example, upheld a promotional rate for electric heating with typical language, admonishing that “at some point” such promotional rates “must reach a magnitude that would bring them within the prohibitions of the antidiscrimination statute,” but finally continuing that “in this instance” the allowances were not fairly shown “to be excessive, disproportionate, unreasonable or unjustly discriminatory.”\textsuperscript{75}

1. \textit{A Rational Basis Analysis}

Both some organizational clarity and some understanding of why formulation of a precise and complete rule for determining unjust


\textsuperscript{73} See Priest, note 41 above., vol. 1, pp. 301-03.

\textsuperscript{74} Bonbright, note 72 above, p. 377.

\textsuperscript{75} Gifford v. Central Maine Power Co. 217 A.2d 200, 203, 63 PUR 3d 208, 212 (Me. 1966).
discrimination claim is difficult can be gained through analogy to the method of rational basis analysis in equal protection cases under the Fifth and Fourteenth Amendments. Utility customers can make two kinds of unjust discrimination attacks against a utility service program. First, they can contend that they are in all pertinent respects identical to

76. In fact, it is a close question whether the equal protection clause of the fourteenth amendment might not apply directly to discriminatory rate practices by non-municipally-owned utilities. The touchstone is whether state action can be found in the ratemaking practices of such utilities. Civil Rights Cases, 109 U.S. 3, 13 (1883). Prior to the Supreme Court’s decision in Jackson v. Metropolitan Edison Co., 419 U.S. 345 (1974), it appeared that the granting of monopoly status to a private utility, combined with extensive state regulation, might be sufficient to constitute state action. See Note, Fourteenth Amendment Due Process in Termination for Nonpayment, 86 Harv. L. Rev. 1477 (1973). In Jackson, however, the Supreme Court limited the scope of the state action concept in the public utility context.

The petitioner in Jackson sought damages and injunctive relief under 42 U.S.C. § 1983 against Metropolitan Edison Co. for terminating her electric service for nonpayment of her electric bill, without granting her a hearing or providing notice. Petitioner alleged that the respondent’s actions under powers granted to it in its general tariff, filed with the Pennsylvania Utility Commission as a precondition to its obtaining a certificate of public convenience and necessity, constituted state action. The Supreme Court disagreed:

The mere fact that a business is subject to state regulation does not by itself convert its action into that of the State for purposes of the Fourteenth Amendment. Nor does the fact that the regulation is extensive and detailed, as in the case of most public utilities, do so. 419 U.S. at 350. Writing for the court, Justice Rehnquist also rejected monopoly status or the provision of an essential service by a utility as indicative of the presence of state action. Id., pp. 352-53. He did not, however, entirely reject the possibility that a heavily regulated utility with monopoly status might undertake acts constituting state action. However, the proper inquiry must be “whether there is a sufficiently close nexus between the state and the challenged action of the regulated entity so that the action of the latter may fairly be treated as that of the state itself.” Id., p. 351.

Significantly, the Court distinguished rather than overruled Public Utilities Commission v. Pollack, 343 U.S. 451 (1951). In Pollack, the D.C. Public Utilities Commission conducted an investigation and held formal hearings to determine whether or not the public safety and convenience were being injured by the playing of radio programs on public buses. 419 U.S. 356-57. The direct involvement of the commission in permitting the action to continue supported finding state action. 343 U.S. 462.

It is not clear where ratemaking falls along a continuum between Jackson and Pollack. The extremes are roughly pro forma approval of a utility decision (Jackson and no state action) and active scrutiny and sanctioning of the utility action (Pollack and state action). Although the precise practice varies from state to state, in many states the utility commission must approve the new schedule, which might be accomplished by simply not taking action to suspend it. Should customers or the state itself challenge the proposed rates, the utility commission may be required to hold hearings and determine whether the proposed rates are justified. See, e.g., N.C. PUBLIC UTILITIES LAW ANN. §§ 62-130 through 62-134 (1978). These actions entail greater state involvement than those in Jackson and approach, perhaps equalling, the degree of state participation in Pollack. It is arguable, therefore, that challenged and approved rates are directly subject to equal protection scrutiny.
other customers receiving preferential rates or service. Second, a cus-
tomer might concede some pertinent difference between herself and
another customer, but argue that the disparity in treatment between
them is out of proportion to that difference. These two claims are similar
to those generically raised in equal protection attacks.

Like the unjust discrimination principle, the equal protection prin-
ciple sustains an individual's right to be treated like other individuals
similarly situated. The equal protection challenge succeeds if no suffi-
cient reason can be adduced for treating two individuals differently. It
also succeeds if the relationship between the ground of difference and
the disparity in treatment, sometimes termed the means-end fit, is too
tenuous to be sustained. Although the Supreme Court asserts that its
application of rational basis review of equal protection challenges is not
"toothless," it also acknowledges that considerable freedom must
properly be accorded the legislature. It would be foolhardy even to
attempt a summary of all the reasons underlying this flexibility, but a
part of the explanation that bears directly on the unjust discrimination
concern can briefly be described.

Legislatures have authority to pursue a large number of public
purposes in discharging their governmental responsibilities. It is hard to
imagine that all such purposes could be carefully and comprehensively
catalogued. Even if they could be, all or any combination of these
purposes could be pursued to varying degrees in a particular piece of
legislation. No requirement exists that a statute have a single purpose.

77. Mathews v. Lucas, 427 U.S. 495, 510 (1976). In reviewing economic legislation, the
Supreme Court held that a statute would be upheld if "any state of facts that
reasonably can be conceived to constitute a distinction or difference in state
policy..." can be found. Allied Stores v. Bowers, 358 U.S. 522, 530 (1959). Accord,
Vance v. Bradley, 440 U.S. 93, 97 (1979). Once a state policy justifying a
distinction has been glimpsed, the legislation is constitutional unless the choice of
means to address the policy is "clearly wrong, a display of arbitrary power, [and]
not an exercise of judgment." Mathews v. deCastro 429 U.S. 181, 185 (1976),
quoting Helvering v. Davis, 301 U.S. 619, 640 (1937). See also, U.S. Railroad
considerable constitutional flexibility in 2 dimensions: the policies statutes can
pursue are numerous and need not even be put forward by the legislatures as the
grounds for the enactments, since the courts will imagine them if at all possible;
the means by which those policies are furthered can be imprecise, partial, or crude.
McGowan v. Maryland, 366 U.S. 420, 425-26 (1961), captured both elements, in
stating that the equal protection clause

...permits the States a wide scope of discretion in enacting laws which
affect some groups of citizens differently than others. The constitutional
safeguard is offended only if the classification rests on grounds wholly
irrelevant to the achievement of the State's objective. State legislatures
are presumed to have acted within their constitutional power despite the
fact that, in practice, their laws result in some inequality. A statutory
discrimination will not be set aside if ate of facts reasonably may be
conceived to justify it.
Once this plasticity in defining and pursuing purposes is accepted, the combinations and permutations of purposes that could be embodied in any specific statute are virtually infinite. As a general proposition, it would constitute the worst sort of guesswork to identify \textit{ex post} exactly what purposes motivated the legislature in enacting any specific bill and the degree or intensity to which each such purpose is individually pursued. Having no way to enumerate each of the purposes that underlie a statute, nor their relative importance, and having no reason under rational basis review to invalidate particular combinations of purposes and intensities in any event, courts necessarily are unable to check carefully for synchrony between means and ends. For this and other reasons, a considerable range of freedom must be accorded to the legislature.\footnote{Bonbright has come closest to cataloging the allowable grounds for differences in rate treatment. His list of legitimate objectives for a rate structure is:}

\begin{enumerate}
\item The related, 'practical' attributes of simplicity, understandability, public acceptability, and feasibility of application.
\item Freedom from controversies as to proper interpretation.
\item Effectiveness in yielding total revenue requirements under the fair return standard.
\item Revenue stability from year to year.
\item Stability in the rates themselves, with a minimum of unexpected changes seriously adverse to existing customers....
\item Fairness of the specific rates in the apportionment of total costs of service among the different customers.
\end{enumerate}

\footnote{\textit{Compare} Schweiken v. Wilson, 450 U.S. 221, 244 note 6 (1981) (Powell, J., dissenting): "We recognize that a legislative body rarely acts with a single mind and that compromise blurs purpose."}

\footnote{76}
7. Avoidance of ‘undue discrimination’ in rate relationships.
8. Efficiency of the rate classes and rate blocks in discouraging wasteful use of service while promoting all justified types of amounts of use:
   (a) in the control of the total amounts of service supplied by the company;
   (b) in the control of the relative uses of alternative types of service (on-peak versus off-peak electricity....)79

This catalogue clearly cannot generate a precise guide to unjust discrimination analysis. If including “avoidance of ‘undue discrimination’” in the list means that there exists an independent standard for assessing discrimination claims which is not based on other valid objectives on the list, we are left in the dark about what that standard is. Even if such an independent standard could be found, the catalogue provides no means of resolving situations in which the goal of avoiding discrimination conflicts with other legitimate goals such as simplicity and understandability or discouraging wasteful use of services. Alternatively, if the only way to judge discrimination claims lies in comparing the rate and service structure to the other permissible objectives on the list, we are still left with no method for resolving conflicts among objectives. The Bonbright catalogue thus exhibits both of the major reasons for flexibility in assessing discrimination claims: There are multiple valid rate and service structure objectives, and we have no precise tools for judging proportionality.

The doctrines that have matured in this area of public utility law reflect the absence of a well-defined basis for ruling a rate difference unjustly discriminatory. Courts defer to utility commission judgment by holding that the burden of proving unjust discrimination rests on the party asserting the claim.80 In addition, the initial determination of whether discrimination exists is entrusted to the utility commission’s sound discretion and will not lightly be overturned.81

2. "Cost of Service" Basis

Perhaps the strongest candidate for use as a precise tool for assessing possible discrimination in rate structures is the idea that rates should reflect "cost of service" to the individual customer. Among other things, such a rate structure resonates with the natural monopoly model: it might closely replicate the workings of a competitive market for electricity. But even if this were the only organizing principle for rates which would be tolerated, the hoped-for precision is chimerical.

First, there is no "generally accepted" method for allocating costs of producing electricity to particular customer classes, let alone to particular customers. In 1955, the National Association of Regulatory Utility Commissioners (NARUC) identified and compared 16 possible methods of allocating capacity costs to customers, without recommending any of them as superior.82 This prompted a commission reviewing the document to conclude that "every method suggested thus far seems to be possessed of difficulties of one sort or another."83 In fact, NARUC had undercounted: in 1953, Commonwealth Edison had found 29 methods of allocating such costs to customers.84 When this document was reviewed for the Electric Utility Rate Design Study in 1977, it provided support for the conclusion that allocating costs to customers is "a process hampered by the fact that for the greater part of the costs analyzed, specific cost responsibility was impossible to pinpoint. This problem, it might be added, still remains...."85

Second, the very procedure of dividing customers into a relatively small number of customer classes inevitably means that only the "average" customer within a class would be charged actual costs of service, even assuming such could be computed. In part, this is because cost of service depends on geographical location. But geography is only one variable in cost of service. Cost depends upon many factors, including as the amount of other service which is being provided over

82. See Ohio Edison Co. v. City of Mansfield, 41 PUR 3d 452, 561 (Ohio Public Utility Comm'n 1961).
83. Id.
84. Before the Ill. Commerce Comm'n, Objections of Commonwealth Edison to Motion of City of Chicago Respective Cost of Service Studies, Docket No. 41130, October 3, 1953.
85. The Electric Utility Rate Design Study was a nationwide project sponsored by the Electric Power Research Institute, the Edison Electric Institute, the American Public Power Association, and the National Association of Regulatory Utility Commissioners to examine a variety of rate design questions. The quotations in the text are from National Economic Research Associates, An Overview of Regulated Ratemaking in the United States, Palo Alto, CA: Electric Power Research Institute, 1977, Topic 1.1, p. 12, one of the study reports.
that customer's transmission and distribution lines at the moment the
customer is being supplied, which generating units are being used, and
the costs of fuel. Any billing procedure that employs crude class
determinations and glosses over variation in cost in favor of average or
approximate figures will invariably deviate from "true" cost of service.

Third, it turns out that cost of service is not the only organizing
procedure one might choose, even under the natural monopoly model.
Where competition is not possible, the optimum use of resources (which
is the social objective of the competitive market system of distributing
goods and services) can be achieved by pricing according to "value of
service" to the customer, rather than cost of service to the utility. For
this procedure to work, the seller must be able to price discriminate,
in the sense of being able to sell his product to one buyer for one price and
to a second for another, an impossible result under competition. How-
ever, many utilities, including railroads, who are notorious for attempt-
ing to charge "what the traffic will bear," and electric utilities, can price
discriminate to some extent. However, perfect price discrimination is not
generally possible, so that approximations would again inevitably enter
the rate setting process.

Finally, as the Bonbright listing implies, the rate setting criteria
derived from the natural monopoly theoretical construct have never
been endorsed as the exclusive criteria for determining rates. Once it is
conceded that such objectives as stability in the rate structure, simplicity,
understandability, and others are legitimate, it becomes apparent that
the rate setting process does not embody the degree of precision
sometimes assumed. We are back in the situation of multiple valid rate
and service structure objectives with no precise tools for judging
proportionality, and the analogy to judicial deference under the rational
basis test reemerges.

Deference, however, does not equal abdication. The valid objectives
of rate structures are less numerous than those of legislation. Courts
generally scrutinize the results reached by an administrative body such
as a public utility commission more vigorously than they do those
reached by legislatures. Under traditional democratic theory, legislation
is more nearly the product of consensual government than are the
actions of administrative agencies, particularly where agencies operate
under ambiguous and broad enabling legislation. Legislation thus re-
ceives more judicial respect than administrative decisions. Several do-
ctrines of judicial review of administrative proceedings translate judicial
cautiousness about administrative actions into constraints on that action.

86. See Kahn, note 10 below, vol. 1, pp. 63-64, 130-33.
First, administrative agencies must substantiate their decisions with reasoned explanations demonstrating the analytical links between facts and conclusions. While these need not be as elaborate as judicial opinions, certainly more is needed than is required for legislative action. Second, only explanations contemporaneous to the agency action can serve to justify it on judicial review. These impositions combine to give a complaining party and the courts a decision record that is concrete and self-limiting. Since the lack of precise or unique tools to develop acceptable rate structure is no less evident in commission decisions than in court review of those decisions, commission judgments necessarily are subject to fair disagreement.

B. _UNJUST DISCRIMINATION CRITICISM OF CONSERVATION PROGRAMS_

Thus, against the background of an appreciation for the reasons that judicial respect for flexibility in both the objectives pursued by a rate structure and the exact mix of rates selected, it is still necessary to review specific unjust discrimination claims raised against conservation energy programs and to do so with some care. Because the analysis entails testing specific rate and service programs against permissible objectives, further advance can only be made by examining particular programs for utility involvement in conservation. Utility financing schemes are the most frequently criticized of conservation programs.


Although state rules governing judicial review of administrative actions vary, some come quite close to the federal standards. In California, for example, the utility commission must give adequate consideration to and make findings on every material issue which must be resolved to reach an ultimate finding in a proceeding. Northern California Power Agency v. PUC, 5 Cal.3d 370, 380-81 (1971). Articulated findings "afford a rational basis for judicial review and assist the court to ascertain the principles relied upon...as well as [] assist parties to know why the case was lost and to prepare for rehearing or review...." Greyhound Lines, Inc. v. PUC, 65 Cal.2d 811, 813 (1967). In states subjecting agency decisions to less demanding review, the result would, of course, further insulate commission orders implementing utility financing schemes.
Since many different programs can be encompassed in a description that is both general and sufficiently precise to permit analysis, we will use such programs as our particular example.

The most popular conservation financing proposal is utility financial assistance for improving the energy-efficiency of dwellings. As noted earlier, there is an impressive potential for conservation energy from existing residences. They are generally believed to be the least expensive source of any appreciable amount of conservation energy, although that assessment will vary from utility to utility.

So far as unjust discrimination analysis is concerned, however, a great diversity of conservation programs share the pertinent characteristic of residential financing programs: the utility company is providing funds to finance, in whole or in part, a reduction in some current use. This activity simultaneously benefits the utility system by avoiding the costs of new supply and particular customers by providing them with the benefits of energy-efficiency improvements. Utility companies could contract with customers to shift their usage off peak; they could purchase load-cycling equipment and install it in customers' air conditioning systems for load management; they could provide cash rebates for purchase of home insulation; or they could provide loan financing at below-market rates or even at no-interest to stimulate energy-efficiency improvements. All such programs raise essentially the same unjust discrimination issues.


The weatherization loan program of Pacific Power & Light (PP&L) is an example of how conservation financing might work. PP&L performs a home energy audit and recommends weatherization investments whose life-cycle costs are less than the marginal cost of new supply to the utility. Some homes, of course, will be more appropriate for weatherization than others, and some will not be cost-effective places to make such investments. If the customer chooses to participate, PP&L arranges for installation and pays for materials and labor. The customer agrees to repay the principal upon sale of the residence. No interest is paid by the customer. See Vice President Davenport, PP&L, written testimony, before the Oregon Public Utility Commissioners, Docket UF 3444, April 14, 1978. PP&L limits the weatherization programs it will recommend (and finance) to ones that capture energy-savings at a cost that is less than the difference between the utility's marginal cost of new supply and the current average retail cost of its electricity. This limitation ensures that nonparticipants will not face increased costs as a result of the conservation investment, thus following the "nonparticipants-must-benefit" rule. See note 89 and accompanying text below. This aspect of the PP&L program is criticized by some economists. For example, see Cicchetti & Shaughnessy, "Is there a Free Lunch in the Northwest? (Utility-Sponsored Energy Conservation Programs)," Public Utilities Fortnightly, December 18, 1980. Another widely publicized financing plan is California's ZIP program. See notes 37-40 and accompanying text below.
All such programs will purchase some conservation energy from some customers. By assumption, all rate payers as a group will benefit from the program because the utility will be replacing a more expensive supply option with a less expensive one. Less revenues will therefore be required by the utility, and the result will be less call on the customers than would otherwise have occurred.

1. The Case for Nonparticipants

But nonparticipants may still object that participants receive a disproportionate benefit because, in addition to their share in the general benefits gained through the lower utility revenue requirements, participants also receive assistance from the utility in financing measures which enable the participant to purchase less electricity. Under certain conditions, the nonparticipants can make an even stronger objection: reduced sales of electricity to participants could overwhelm the reduction in utility costs, requiring unit prices of electricity to go up, even though the total revenues needed to finance the system go down. Under these conditions, nonparticipant utility bills will increase.89

89. The crux of the nonparticipant-must-benefit issue can be seen with some simple numerical examples. Assume a utility has current revenue needs of $16.00, which are being met by selling 400 kWh per year to 2 customers, C1 and C2. This is Case I in Table 1. The utility anticipates the demand of a new customer, C3, to be 100 kWh. It has three options: Case II, in which it builds a new central powerplant that, because marginal costs are increasing, will have revenue needs associated with its output of $0.080/kWh when operating at a 100 kWh level; Case III, in which the utility buys 100 kWh of conservation energy from C1 at $0.032/kWh; Case IV, in which the utility buys 100 kWh of conservation energy from C1 at $0.064/kWh. In all cases, it spreads its total revenue requirements evenly over all customers. In Cases II, III, and IV, revenue needs increase over Case I. So long as conservation energy is fairly cheap, a nonparticipant such as C2 in Case III will be no worse off under a conservation financing program that she would be under a traditional expansion plan. (Compare C2’s total bill in Case III versus Case II.) In fact, we could have included another case in which she would be better off.

However, that at some price less than the marginal costs of central station power, the nonparticipant will be less well off than if the powerplant had been constructed, even though the utility’s total revenue needs are less. (Compare C2’s total bill in Case IV versus Case II.) This is because a conservation financing program entails both an outlay by the utility and a loss of sales revenues to the utility. At some point, the combination of these two effects result in an increased revenue requirement per unit of electricity sold.

As rate structures and customer classes are made more complex to make the example more realistic, calculation of the precise point at which nonparticipants are harmed by a conservation financing program becomes difficult or even impossible without prodigious effort and some debatable assumptions. The precise impact on a particular nonparticipant becomes similarly obscure. The essential point is quite general, however: ceteris paribus, conservation financing programs
Among nonparticipants there are special subclasses with specially applicable discrimination claims to press. Some homeowners might have weatherized at their own expense prior to the announcement of the utility program. They will now be denied the benefits of the program because they voluntarily removed their dwellings from the eligible class. Call this type of customer the Early Saver.

Some residential customers might be in a position that makes it unwise to participate. For example, renters may be unable to control the investments to be made on the buildings in which they live. Even if they could, they might not have the incentive to do so because they could not capture the homeowner benefits of improved heating efficiency after they left the dwelling. Call such a customer Unable-to-Participate.

Finally, some customers might live in houses so designed that additional weatherization and insulation is not cost-effective. Some such customers may assert that they are willing to take other conservation measures in their houses, if only the utility will expand the program to provide financial assistance for their ideas. Call this sort the Alternative Saver. We will below examine the nature of each of these claims, as variations on or additions to the general nonparticipant objection.

Almost all the general nonparticipant objections to conservation financing proposals fall away once viewed from the proper perspective. A kilowatt-hour saved from existing demand is as fully a source of new supply as another kilowatt-hour generated from the utility’s next planned new plant. In both cases the utility makes available to the entire customer system a kilowatt-hour that was previously unavailable.

Every customer with a home that can be weatherized, then, is a potential supplier of conservation energy to the utility system. It is appropriate and reasonable for the utility to buy some of that supply from the customer, if the supply from each participant can be had at a cost to the utility less than the cost of alternative sources of supply. The objective being pursued, the minimization of total system cost, is a legitimate one.\textsuperscript{90}

Whether the supply from each participant must be purchased by the utility is a pertinent threshold issue. Certainly, voluntary conservation by homeowners would be cheaper for the utility than the utility’s can satisfy a least-cost criterion and still leave nonparticipants worse off than they would have been if a more expensive powerplant had been built.

The condition of reducing use and consequently paying higher rates has been called the “paradox of conservation.” The prior examples show that, contrary to some popular opinion, the paradox need not hold each time conservation programs are implemented. On the conditions that must exist for it to hold in the case of an electric utility, see Energy Services Corporations, note 15 above, pp. 166-67. See Table 1, p. 1032.

\textsuperscript{90} See note 14 above.
financing that conservation. The need to distinguish between conservation which would otherwise occur and conservation available to the utility only, should it develop a purchase program, complicates the initial decision to adopt such a program. It engages the utility in problematic judgments about price elasticities, the extent of consumer information about alternatives, and the presence of market imperfections.

These complications do not, however, invalidate on unjust discrimination grounds any program that survives these threshold inquiries. If a utility commission determines that conservation energy exists within the utility system beyond what would otherwise be tapped by customers, it can deal with any qualifying customers as suppliers. The rate schedule for such participants will be unaffected with respect to service received, since any payments or subsidies provided by the utility are attributable to the supply of conservation energy being provided. So long as the payments made under such programs bear a reasonable relationship to the value of the benefit the utility is receiving, the difference in treatment is reasonably related to a valid objective of the utility company. No unjust discrimination claim is tenable.

The coincidence of a residential customer being both a customer and a supplier is neither novel nor conceptually troublesome. Utility companies have long had such simultaneous relationships with customers. Lumber mills, cement factories, food processing plants, and others have generated electricity at certain times of the year or of the day and have sold excess power to the utility at some times, while purchasing power from the utility at others. Such arrangements require separate consideration of the value of the supply to the utility on one hand and the appropriate rate schedule for sales to the customer on the other. The two parties can disagree over each of these terms.91 But disagreements

91. In other regulated industries, customers who also supply services or production inputs to the utility are even more apparent. The case of railroads and freight cars is a classic example. "Freight cars are facilities of transportation, as defined by the [Interstate Commerce Act, 49 U.S.C. §1(3)]. The railroads are under an obligation, as part of their public services, to furnish those facilities upon reasonable request by a shipper...They are not, however, under an obligation to own such cars." General American Tank Car v. El Dorado Terminal Co., 308 U.S. 422, 428 (1940). The most frequent source of cars not owned by the railroads were, quite naturally, shippers, who thus became customers and suppliers simultaneously.

This combined status creates problems that must not be overlooked. When competitive commercial concerns are involved, the major issue is that a customer-supplier does not gain an unfair advantage over others in the form of a lower net cost of transportation by virtue of profits made as a supplier. The ICC early construed its authority to ensure supplier charges were "reasonable" to include protecting against such abuses. See, for example, Use of Privately Owned Refrigerator Cars, 201 ICC 323 (1934); In the Matter of Private Cars, 50 ICC 652 (1918). Conservation energy programs also face practical problems—such as ensuring that
of this sort do not imply that the coincident relationship of supplier and customer necessarily violates any principles of utility practice.

Once the concept of conservation energy as a source of supply and its corollary that a single individual can be both a consumer and a supplier are accepted, the claims of discrimination in most conservation financing schemes melt away. Utility financing of weatherization material and installation is a utility purchase of a valuable service from a supplier who also happens to be a customer. In arranging such supply purchases, the utility has never been subjected to the same strictures of even treatment as it has on the sale side of its business. As a general proposition, there is no requirement that a utility buy power or production input factors from everyone who offers to sell, nor even that it make every factor purchase on the same terms. It would be proper, for instance, for a utility that decided it only needed that much to purchase no more than 50 megawatts of conservation capacity and to stop purchases once that level had been met. No question of discrimination should be raised by such action.

Something more must be said about those financing programs that result in rate increases for nonparticipants. In those cases, nonparticipants bear the double indignity of subsidizing more efficient energy use for the participants while watching their own electrical bills go up. Most utility commissions reviewing conservation financing programs have been extremely sensitive to such indignation. To avoid imposing rate increases as a result of financing conservation, some have adopted a "nonparticipants-must-benefit" constraint.92 Whatever its value in terms of equity or as a political constraint, the requirement that nonparticipants benefit is unnecessary for meeting the test of unjust discrimination.

In a world in which marginal cost of new supply exceeds the current price per kilowatt-hour, the world in which we all live at the moment, conventional new supply could not meet the "nonparticipants-must-benefit" rule either. Here the nonparticipants are those customers who are not using any of that new supply and who may in fact be doing everything in their power to reduce consumption. They are subsidizing new uses of electricity, since the capacity necessary to serve those new uses is available to the utility only at marginal cost, while the customers

the utility is receiving something of value for its subsidy. However, at least in conservation energy programs within the residential class, avoiding unfair competition is not one of those problems. The concern over disadvantaging a shipper vis-a-vis a business competitor dominates the problems created by combined customer-suppliers. See Lake, note 48 above, pp. 91-151.

92. See note 89 above.
demanding it pay something like average cost. The people who pay the difference subsidize the new uses. This subsidy takes the form of rate increases which are no less real than those argued to be legally disabling when they occur in connection with a conservation financing system. Construction of conventional new supply has never been stopped on the ground that it would necessitate unjust discrimination in rates.

That is as it should be. The nonparticipant's bill is not going up as the result of unjust rate discrimination. Participants and nonparticipants previously in the same customer class will remain in that class and will continue to receive utility power on the same terms and conditions. If those customer classes were lawful and justifiable prior to institution of the financing program, they remain so. The addition of a conservation financing program does not alter the circumstances of the pre-existing utility-customer relationship. Even if the financing program is considered part of the utility-customer service relationship, the financing subsidy provided by the utility is attributable to, and proportionate to, the benefit the utility is receiving from the participant. The fact that nonparticipants are demanding the same amount of power as they were prior to the conservation financing program while the participants are now demanding less is irrelevant to a discriminatory treatment claim.

To be sure, this fact is not irrelevant to other elements of utility commission rate and service policy. Rates influence demand, and rates and demand together affect revenue stability and the utility's ability to raise revenue. The commission has an obligation to provide the utility an opportunity to earn a reasonable rate of return on operations. The electric utility world is extremely aware that some components of electrical demand are much more elastic, or price-sensitive, than was suggested by orthodoxy several years ago. As rates are driven upward by increasing marginal costs, commissions must assess the consequences of growth on the ability of the company to earn adequate revenues, something the industry had previously take for granted. Though the double-edged impact of a conservation financing program cannot be ignored in the context of the revenue requirement, that assessment is analytically separate from the claim of rate discrimination, which focuses on structural relationships between parts of the rate and service classification rather than on overall revenue needs, demand elasticities, and future demand projections. Such an assessment, furthermore, treats conservation financing routes to new supply as alternatives to be fairly compared with other options, options that themselves are not branded with the charges of rate discrimination that have faced the financing programs.
2. The Early Saver, Unable-to-Participate, and the Alternate Saver Dilemmas

Several embellishments are necessary to resolve the unique concerns of Early Saver, Unable-to-Participate, and Alternate Saver. Each of these subclasses of nonparticipants illustrates important considerations of equity and prudence in the design of financing programs. However important they may be in terms of those concerns, none of them diminish the conclusion just reached that financing programs are not vulnerable to unjust discrimination objections.

a. Early Saver

Early Saver could have been eligible for the program if he had only waited to install weatherization material until the utility conservation program commenced. As one result of acting early, he bears the entire burden of financing the weatherization, while his neighbor will receive the partial underwriting of those costs by the utility. Does this disparity amount to unjust discrimination? Should the utility be required to provide a like benefit to Early Saver, or forego any financing program?

The answer is clearly no. We would not expect the utility to pay someone who previously owned a hydroelectric facility or a windmill for power no longer in his possession. Indeed, we would be startled if it did. Individuals act in their own best interests, as they then only imperfectly perceive them, all the time. The Early Saver weatherized because he thought it would be in his interest to do so. And the benefits he received from weatherizing are in no way diminished by a subsequent utility program.

If the utility were tightly constrained to a limited sphere of action—if, for example, it had firmly declared just months before that it would never adopt a conservation financing plan—Early Saver might have a claim that his reasonable expectations had been abused. But the utility's horizons for new sources of supply are extremely flexible, not constrained. The best the rest of us can do is what we always do, act in the face of uncertainty. No one will reimburse me for the now valuable collection of comic books I threw out the last time my family moved, and no Early Saver should have a claim to recompense for actions voluntarily taken in advance of the conservation financing program.

This is not the dawning of an era of callousness. As discussed further below, financing programs would be made accessible to a wide range of potential participants as a matter of good judgment and prudence. Early Saver may be able to supply conservation energy in other ways. If he cannot, however, the resulting program is no less
legitimate and equitable than are the promotional rate programs long espoused by utilities. Customers exactly analogous to Early Saver were routinely ignored in the promotional rate and incentive schemes developed by utilities and overwhelmingly validated by commissions and courts back in the halycon days of declining costs.

For example, when the Maine Supreme Court approved a plan adopted by Central Maine Power to provide incentive payments to customers who adopted electric heating, or who changed the amperage wiring of their house from 50 to 100 amps, no one thought the program discriminated against those customers who had already installed electric heating or changed their amperage.93 When Consolidated Edison adopted a plan to pay customers who traded in their ice boxes for electric refrigerators, no one thought the program unjustly discriminated against customers who had just cancelled their service with the iceman because they had purchased new refrigerators on their own.94 As the court assessed the matter, “a utility that has established rate classifications available to all customers for a like and contemporaneous service... has fulfilled its obligations under the statute. When it treats all its appliance customers on a fair and equitable basis it has done all the law requires it to do.”95

b. Unable-to-Participate

Unable-to-Participate, the renter who pays his utility bill but who will not reap the major portion of the capital improvement benefits from weatherization, personifies a critical imperfection in the rental market, but not a discriminatory rate problem. The fact that incentives—or prices, for that matter—have different impacts on different customers depending on their circumstances only restates an important positive aspect of the conservation financing program. The customer still makes the individual choice whether to participate or not. People are differently situated financially, or in terms of available alternative solutions, or in other ways. They can make their own assessments about participation. Making the program available to the customer class is all that unjust discrimination law requires.

The market imperfection faced by renters does hamper utility realization of the full conservation potential in its service area. Whenever the costs and benefits of an action are not captured by the same

person, inefficiencies may result. In this instance the inefficiency is that otherwise cost-effective weatherization programs may not be undertaken. When multi-unit structures are involved, organizational and bargaining difficulties further enhance the likelihood of inefficiency. Equity concerns may argue for structuring particular programs to overcome these imperfections.

c. Unable-to-Participate and Alternate Saver

Unable-to-Participate may attempt to turn these real inefficiencies into an advantage in argument. Suppose she asserts that the discrimination inherent in the proposed financing program is that it is not accompanied by parallel programs, providing like benefits to people like herself, for conservation efforts they are willing to undertake in which there are no problems with spillovers or mismatched costs and benefits. Unable now has joined forces with Alternative Saver, who does not want to weatherize, but has other notions in mind for saving energy, such as agreeing to turn down his thermostat in winter to 62° and his air conditioner to 85° in return for some payment from the utility. Alternative and Unable both claim that failure to provide the conservation programs that they want amounts to rate and service discrimination.

This is a good try. Commissions and utility companies should be sensitive to providing programs that make the advantages of utility purchases of conservation energy as broadly available as possible, within the overall constraints of the least-cost principle. But the unjust discrimination doctrines are sufficiently flexible to permit the utility to capture one part of the available conservation energy at a time. There are several reasons to prefer weatherization programs as initial targets of opportunity. So long as they are sensible reasons, the conservation programs will withstand unjust discrimination scrutiny.

Structural changes in customers' dwellings will provide the utility with a highly reliable supply of conservation energy. Once the heating efficiency of the home has been improved, there is no reason to suppose that the customer will increase electrical consumption on account of his heating needs. After all, that customer is interested in the ultimate satisfaction of an end use, not the burning of electricity for its own sake, particularly if that leads to increased bills. Monitoring, furthermore, is not as necessary when the change in consumption has been brought about by structural or mechanical alterations. This reduces the total costs of the program to the utility. Voluntary changes in thermostat settings, as a contrary example, are more subject to reliability problems.
Participants may decide on a haphazard basis to exceed their agreed-upon limits from time to time. As a result, some utility monitoring is required to ensure the system is getting what it pays for and that it is maintaining an accurate assessment of potential demand.

Weatherization programs have an additional credential for being the first program undertaken in many utility systems. As Northern State Power Company found in 1974, attic reinsulation ".represents 'the greatest single energy loss (from the home) that can be improved fairly easily at minimum expense to the customer.'" Weatherization appears to be the program that produces the most cost-effective conservation energy. It is thus an easy program for customers to understand and to implement, very cost-effective for the utility, capable of producing reliable conservation supplies, and easy to monitor. These are ample justifications for implementing the program first, even admitting that Early Saver and Alternative Saver may have some conservation supplies to contribute as well. Under these circumstances, the utility is justified in tapping part of the conservation supply first, much as a legislature does not violate equal protection by implementing a program that captures only a part of a potential benefit or that eliminates only part of an evil.

Once again, parallels can be found in promotional rate cases. Such promotional programs routinely did not make financial benefits available to existing customers who simply promised to use more electricity. Neither did the programs that were geared to inducing electric resistance heating make their benefits available to other customers who wanted to purchase other electricity-using equipment. "A classification does not have to do perfect justice under all circumstances."

Nothing just said bars, nor in any way should discourage, utility commission attention to equity concerns in establishing rate structures or in approving conservation financing programs—the equitable distribution of costs and benefits is an important component of utility commission jurisdiction. It should, however, liberate the debate over

97. Compare Williamson v. Lee Optical, 348 U.S. 483, 489 (1955): Evils in the same field may be of different dimensions and proportions, requiring different remedies. Or so the legislature may think... Or the reform may take one step at a time, addressing itself to the phase of the problem which seems most acute to the legislative mind.
100. Id., 211 A.2d 809.
such programs from the phantom objection that these programs, as
generally described, raise problems of unjust rate and service discrim-
ination. Freed from that spectre, commissions can properly comprehend
that they are operating within a sphere of sound discretion and judg-
ment and that proceedings need not be prolonged to resolve nonexistent
discrimination issues.

V
JURISDICTIONAL ISSUES

A. UTILITY SERVICE AND UTILITY REGULATION

The concept of a "utility service" was historically neither narrowly
defined nor limited to monopolies or any particular industry. To the
contrary, a surprisingly diverse set of activities, including cotton gins
and ice houses, have been subjected to public utility regulation by
legislatures convinced that the "public interest" required it.101 The
Supreme Court made clear that state judgments concerning the ap-
propriateness of regulation were to be given wide latitude in Nebbia v.
New York:

It is clear that there is no closed class or category of businesses
affected with a public interest....The phrase 'affected with a
public interest' can, in the nature of things, mean no more than
that an industry for adequate reason, is subject to control for
the public good. In several of the decisions of this court wherein
the expressions 'affected with a public interest' and 'clothed
with a public use,' have been brought forward as the criteria...it
has been admitted that they are not susceptible of definition
and form an unsatisfactory test."102

Thus, public utility regulation was from its inception recognized as an
inherently broad concept that encompasses everything necessary to
further the public good.

Utilities may engage in non-regulable activities but without the
right of a fair return on invested capital which attaches to expenditures

102. 291 U.S. 502, 536 (1934), cited with approval in Jackson v. Metropolitan Edison
made in the public interest.\textsuperscript{103} Appliance sales, for example, have often been treated as a non-regulated activity. Conservation activities also might be offered voluntarily by unregulated utility subsidiaries, but, as already discussed, utilities are reluctant to undertake these programs even with a guaranteed return. It is therefore critical to establish commission authority to treat conservation as a regulated activity.

1. Statutory Authority to Regulate

The starting point for resolving this issue is the state public utility commission statutes. In several states, specific legislation has been adopted authorizing or mandating conservation programs; in these states, there can be little legal argument about programs specifically authorized.\textsuperscript{104} However, the statutes in most states were written decades ago, when the need was simply to make available adequate supplies of power and the meaning of "utility services" was relatively unambiguous. Most states lack specific authorization for utility conservation programs, and no state specifically authorizes all of the programs discussed in this article.

State utility laws typically apply to companies engaged in providing gas, power, or water, to heat or steam services, and to services undertaken "in connection with or to facilitate the utility's primary business."\textsuperscript{105} Courts have logically inferred that such language confers jurisdiction over the adequacy, installation, and extension of energy services, in addition to related facilities.\textsuperscript{106} Commissions may have jurisdiction over even traditionally "non-regulable" activities if they are likely to affect regulated services significantly.\textsuperscript{107} However, there are few hard and fast rules concerning the boundaries of these terms. Courts use such phrases as "cognate and germane,"\textsuperscript{108} which are conclusions more than tests.

Many statutes emphasize that commission authority is to be interpreted broadly. For example, the Illinois Commerce Commission is given


\textsuperscript{104} However, such legislation can be ambiguous in scope and sometimes creates uncertainty about programs not receiving legislative endorsement. See Southern California Gas Co. v. PUC, 596 P.2d 1149 (Cal. 1979).


\textsuperscript{107} Classified Directory Subscribers Ass'n v. PSC, 383 F.2d 510 (D.C. Cir. 1967) (jurisdiction to regulate "Yellow Pages" advertising by telephone utility).

\textsuperscript{108} Pacific Telephone & Telegraph v. Eshleman, 166 Cal. 640, 139 P. 1119.
"general supervision of all public utilities."\textsuperscript{109} The Washington Utilities and Transportation Commission has the duty to "regulate in the public interest...the rates, services, facilities and practices" of public utilities, but "services" is not defined.\textsuperscript{110} The District of Columbia statute states the term "service" is to be interpreted "in its broadest and most inclusive sense."\textsuperscript{111} The Wyoming statute grants the public service commission "general and exclusive power to regulate and supervise" utilities.\textsuperscript{112} In a number of states, the commissions derive their authority from state constitutions, and courts tend to view their authority even more broadly.\textsuperscript{113}

Similarly, states that were concerned with defining the nature of the entities they intended to regulate included statutory language interpreting "public utility." The key test is generally whether the person or corporation offers a basic commodity, is "affected with a public interest," and "operating for the purpose of supplying the public for domestic, mechanical, or public uses."\textsuperscript{114}

2. Regulatory Evolution

These broad delegations of authority reflect the evolution of utility regulation. Municipal and subsequent state legislation was from the start concerned with assuring the adequacy and reliability of specific services, such as lighting, which could best be realized by eliminating wasteful duplication of facilities and obtaining the benefits of scale economies. Indeed, the first electric utility, the Edison Electric Illuminating Company, was, as its name indicates, organized to sell lighting rather than electricity.\textsuperscript{113} Detroit Edison gave light bulbs to its customers without charge until challenged on antitrust grounds in the mid-1970s, and no one challenged the commission's jurisdiction to approve the program.\textsuperscript{116} The Potomac Electric Power Company still owns and maintains the street lights of Washington, D.C. Thus, regulation of electric utilities was from the start grounded on the public service model.

\textsuperscript{110} WASH. REV. CODE ANN. § 80.01.040(d).
\textsuperscript{111} D.C. CODE ANN. § 43-104.
\textsuperscript{112} WYO. STAT. ANN. § 37-2-112.
\textsuperscript{113} See, for example, Evans v. Simpson, 190 Colo. 426, 547 P.2d 931 (1976) (Commission presumed to have broad authority unless limited by legislative action).
Regulation encompassed related services, such as lighting, and extended to the customer's use of electricity when appropriate to meet important public needs. While conservation or energy efficiency were not *per se* within legislative contemplation, the delivery of improved service through involvement in the use of electricity was clearly expected.

Expensive interpretation of old terms to encompass jurisdiction over new technologies to provide better forms of the same service has recent precedent in the telecommunications field. Many telephone companies sought to add paging devices and radiotelephone equipment to their operations as regulated services beginning in the 1950s. Competitors naturally objected to the inclusion of these new services as recoverable utility expenses. They considered this to be unfair competition.

Most courts ruled in favor of the extension of jurisdiction to these new services, despite the absence of the elements of national monopoly. A leading case is *Commercial Communications v. California PUC*, sustaining the application of PUC jurisdiction to mobile communications systems. A closely divided California Supreme Court concluded that the relevant consideration was whether the utility was offering a "telephone service." The concept of telephone service, the court found, included all facilities "for the transmission of telephone messages, or for communications by telephone." An Illinois decision similarly ruled that jurisdiction over radio paging devices "is a logical extension of an improvement of existing telephone service." Neither court was troubled by the fact that the same service would be offered by regulated and nonregulated companies or by the limited class of customers able to avail themselves of the service. They focused on the nature of the service being provided, in this case communications, rather than on the type of equipment or medium used to provide that service.

**B. CONSERVATION AS A "UTILITY SERVICE"**

The delivery of conservation measures by utilities should not pose conceptual difficulties on the order of the radio paging and mobile telephone cases since conservation programs are much more clearly designed to improve the quality of *existing* services, rather than to provide a new service. Stated in terms of broad principle, this interpretation appears to be unquestionable. A recent review of state action

118. 327 P.2d 513, 519 (1958).
119. 370 N.E.2d 528, 530.
relevant to the ratemaking standards set forth in the Public Utility
Regulatory Policies Act indicates that many state commissions have
enunciated the fundamental importance of conservation.\(^{120}\) The Cali-
ifornia Commission, for example, announced in a 1976 decision that
"conservation in the sense of efficient allocation of electricity [is to be]
the keystone of the rate structure."\(^{121}\) The Michigan Commission
adopted a similar statement in 1974.\(^{122}\) Other states, while not adopting
broadly stated conservation principles, have emphasized conservation as
an important justification for changes in rate structure and the initiation
of load management techniques.\(^{123}\) To our knowledge, no state has
rejected utility conservation activities in principle. The U.S. Supreme
Court, in a decision overturning on First Amendment grounds a ban on
utility advertising to promote use of electricity has also noted the
obvious relevance of conservation efforts to utility regulation:

We accept without reservation the argument that conservation,
as well as the development of alternate energy sources, is an
imperative national goal. Administrative bodies empowered to
regulate electric utilities have the authority—and indeed the
duty—to take appropriate action to further this goal.

Another reason for assuming commissions have some jurisdiction
over utility conservation activities is the unquestionable relevance of
conservation in powerplant licensing and rate proceedings associated
with construction programs. Of course, the fact that commissions must
be able to forecast demand and that they therefore must be experts on
conservation opportunities does not necessarily imply jurisdiction to
implement conservation programs. A commission could argue that it is
obligated to consider only those conservation measures likely to occur
without its intervention.\(^{125}\) However, the commission's expertise in
conservation opportunities and the recognized relevance of conservation

\(^{120}\) Stone & Webster Management Consultants, *Techniques for Analyzing the Impacts of
Certain Electric Utility Ratemaking and Regulatory Policy Concepts*, Washington, DC:
Department of Energy, 1980, DOE/RG/06428-03.

\(^{121}\) *Id.*, p. 22.

\(^{122}\) *Id.*, p. 131.

\(^{123}\) *For example, id.*, p. 59 (Georgia).

General, *Electricity Planning—Today's Improvements Can Alter Tomorrow's Investment
1980, EMD-80-12.

\(^{125}\) Precisely this issue arose in California, although, in part due to the division of
jurisdiction between the California Energy Commission, a forecasting and licensing
agency, and the PUC. See *ABA Report*, note 12 above, pp. 35-38.
as an alternative to powerplant construction do bear on the jurisdictional issue, as we shall establish in discussion of specific programs below.

The appliance promotion cases discussed above provide another strong legal basis for the application of PUC jurisdiction to conservation activities. These cases involved virtually the same arguments made in the context of conservation programs. The only difference was that because of declining marginal costs it was in the public interest to promote greater use of electricity. The analogy is striking: utilities were involved in the distribution of a commodity at the customer end of the line designed to improve the efficiency of the system by changing characteristics of the customer's demand. It can hardly be argued that conservation expenditures represent a significant conceptual departure from these past precedents.

The U.S. Supreme Court's Central Hudson decision and the commission policy statements recognize the duty to promote conservation, but they do not establish what actions are "appropriate." Stated in general terms, it can hardly be doubted that conservation expenditures are within commission jurisdiction, much as any investment to improve the efficiency of a boiler or turbine would be acceptable. From the standpoint of the utility and nonparticipating customers, improvements in efficiency of energy utilization have the same effect, whether utility equipment or customer actions are the source. Yet the limits on this general principle clearly have troubled commissions and reviewing courts. Hookup restrictions are a form of building regulation that is, at least on the surface, remote from the expertise and reach of a utility commission. Conservation subsidies engage the utility in lending practices that also raise atypical issues for commissions. What type of nexus between the delivery of electricity and a proposed conservation activity is necessary?

Perhaps the only way to answer this question is by analogy. Many utility activities seemingly remote from the delivery of electricity have been approved by commissions. Examination of these cases and others

126. See text accompanying notes 93-95 above.
128. If equipment to improve the output or efficiency of energy production from utility equipment is allowable, it surely makes no difference that the relevant equipment is located on the property of a customer. Meters and transmission lines enter customer property but remain the property of the utility. Purpose, not location, is the jurisdictional issue. Neither should it be relevant to jurisdiction whether the customer is simply asked to allow the installation of the equipment on his property or whether he or she is given some fraction of the resultant savings. The distribution of benefits is subject to anti-discrimination standards, but it is not jurisdictional.
which have gone "over the line" suggest that conservation subsidies should lie clearly within the jurisdiction of public utility commissions.

C. CONFLICTS BETWEEN THE UTILITY CONSERVATION ROLE AND UTILITY PRACTICES

1. "Lifeline Rates"

One of the most frequent challenges to utility commission jurisdiction has been in the context of proposals for reduced rates for low-income consumers.\(^{129}\) Many commissions have sought ways to protect the poor, particularly the elderly poor, from the effects of rate increases. One particularly popular approach is the use of special discounts for the first units of energy used on the assumption that low-income customers will be the primary beneficiaries. Another method is to use the criteria for food stamps or some other means test to qualify for lower rates on some limited amount of energy. States were required to consider, but not necessarily to adopt, some form of "lifeline rates" by the Public Utility Regulatory Policies Act.\(^{130}\) States must articulate reasons for refusing to adopt such rates.

To the extent special discounts are given solely on the basis of socioeconomic considerations, they would appear to run afoul of standard restrictions on rate discrimination, unless specifically authorized by legislation.\(^{131}\) A reduced gas rate for low-income customers in Colorado was rejected for this reason.\(^{132}\) Other cases have accepted social considerations as a relevant factor to be considered, but it is frequently said that rate structures bearing only coincidental relationship to costs of service are illegal.

Lifeline rates have been sustained when they provide a reduced rate for some initial block to all customers.\(^{133}\) Since the rate is offered to all

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131. See notes 71-88 and accompanying text above.


133. For example, U.S. Steel v. Penn. PUC, 390 A.2d 865 (1978).
customers, it is not \textit{prima facie} discriminatory. States have also found a cost of service relationship, since rates which increase with use more accurately reflect the high cost of marginal electricity and of additions to capacity. For example, the California PUC concluded that the allocation of costs to higher usage blocks should "trigger an economic signal to residential customers sufficient to encourage them to curtail their electric usage as close as possible to lifeline quantities."\textsuperscript{134}

The lifeline cases suggest that social considerations are part of the concept of "public good" appropriate to commission consideration—so long as the resultant rates are not inconsistent with cost of service principles. Rates that promote social objectives and that relate generally to customer costs should be sustained. Conservation activities can be justified on both grounds. They further broad social interests, such as conservation of limited resources, while tracking cost of service.

2. Economic Development

While few if any utilities continue to promote all-electric homes or sale of appliances for the purpose of increasing demand, the concept is not at all outdated. Many utilities in economically depressed areas still engage in efforts to promote economic development with concomitant increases in the demand for electricity.\textsuperscript{135} For example, Consolidated Edison offers a 25% discount on electricity rates to new customers in selected economically depressed areas of its service territory. Detroit Edison has similarly renewed an old program to promote area development and increase the use of its substantial excess capacity, which now exceeds 40%.

Where facilities are substantially underutilized, some economic growth may be in the interest of all customers. However, the relevant point for this discussion is the legal rationale for such efforts by utilities. "Economic development" is no more "utility service" than is conservation; both are indirect means of achieving lower cost service. Indeed, conservation measures can be directly related to cost of service, while the cost consequences of economic development are unpredictable. It may produce demand for energy in forms other than provided by the utility, or at times that increase rather than reduce costs of service.

A recent discussion of utility development activities included two contrasting illustrations of the extent to which utilities do or do not

\textsuperscript{134} Re Pacific Gas & Electric Co., 34 PUR 4th 1, 73 (1980).
demonstrate the connection between their activities and accepted utility "services." Florida Power & Light, which serves a rapidly growing area without substantial excess capacity, has a vice president for economic development. Testifying at a legislative hearing on vocational training, he was asked about the relevance of this function to the utility. He reportedly told the committee that he did not know the impact of the project on utility revenue or load, but he did know a planned facility would add 2,000 jobs to the area and an additional annual payroll of $20 million. The revenue and load figures were therefore said to be irrelevant.

In another case, a utility at least recognized the need to demonstrate some connection between its activities and the accepted objectives of a regulated utility. Pennsylvania Power & Light was challenged by the staff of the state commission on its plan to recover economic development activity expenses from ratepayers. The utility argued that the economic health of the utility is dependent on the economic condition of the service area and that development activities therefore support utility service. The PUC ruled in favor of the utility.

These programs, like the lifeline cases, indicate another aspect of the latitude allowed utility commissions in applying their authority. Development activities which have remote or nonexistent benefits for ratepayers have been accepted because of general benefits to the community. In comparison, conservation activities much more directly contribute to the cost and reliability of electricity.

3. Institutional Advertising, Promotional Practices, and Charitable Contributions

Another common utility practice without direct benefit to consumers and without a clear relationship to the provision of electricity is institutional advertising, meaning noninformational publicity. In a recent Pennsylvania case, a telephone company justified the recovery of such expenditures as necessary to "induce its potential customers to associate the company with high-quality service and technological leadership." The company argued such expenditures were necessary because of competition in telecommunications and that customers would benefit from increased revenues. The commission agreed.

Advertising expenses have commonly been allowed because, while not essential, they contributed to lower rates and better service. This pragmatic view of utility operations has a long history; the Supreme

136. Id.
Court approved advertising expenses by utilities in a 1935 opinion in which Justice Cardozo stated:

A business never stands still. It either grows or decays. Within the limits of reason, advertising or development expenses to foster normal growth are legitimate charges upon income for rate purposes as for others.\(^{138}\)

A similar rationale was used in other decisions to justify utility promotional practices, which included such inducements as “a day at the races,” construction financing for the John Hancock Center in Chicago, trips to Acapulco, and brass doorknockers.\(^{139}\) These measures were justified because of the alleged benefit to all customers. Such practices were stopped because of the energy crisis and changing economic conditions, not because of legal challenges.\(^{140}\)

Even charitable contributions—certainly not essential by any stretch of the imagination—have been sustained in some court decisions. The Massachusetts Supreme Judicial Court reversed the disallowance of charitable contributions for rate purposes and cited the following language from a New Hampshire commission decision: “Such contributions are vital to establish and improve public relations. It is considered much the same as advertising.”\(^{141}\) Where commissions have disallowed charitable contributions, they have frequently allowed for a showing that the expenditures produce a “material benefit” to customers.

PURPA requires that states consider a ban on utility advertising that promotes the use of energy, and this position has been adopted in a growing number of states.\(^{142}\) However, rulings on institutional advertising not designed to promote the use of electricity are more closely


\(^{140}\) Id., p. 13.


divided. Again, those commissions upholding such expenditures have set a precedent for other activities only generally related to the cost or reliability of electricity delivery.

4. Research and Development

Another interesting illustration of utility activities, clearly outside the provision of customer services but which are generally perceived as within the jurisdiction of commissions, is the treatment of expenditures for research and development. Most utilities support industry-wide research through national associations—the Gas Research Institute for gas utilities and the Electric Power Research Institute for electric utilities. The function of these organizations is to engage in research of potential general benefit to the industry. The benefits to any one utility are likely to be difficult to trace and long-term. Further, it is difficult to prove that any developments made by these institutions would not come about through investments by manufacturers and suppliers or as a result of research funded by federal or state agencies. The benefit to any specific utility's customers is therefore debatable.

Because of concerns about customer benefit, nine states do not allow utilities to recover the cost of contributions to trade or professional organizations. These states typically argue that the benefit to the utility would be no different from that enjoyed by the industry at large. However, the vast majority of states do allow recovery, although some effort may be made to review the allocation of funds by the receiving organization. The implication is that expenditures, which are generally related to the improvement of utility services but which are not essential or even clearly beneficial to the ratepayer, are allowable.

5. Utility Recovery of Expenses Associated With Powerplant Abandonment

Additional statutory guidance concerning expenses for which utilities are entitled to recovery of costs comes from the “used and useful” requirement. Almost all state utility laws include provisions stating that utility expenditures must be “used and useful” to be charged to the ratepayers. The meaning of this seemingly simple standard has proved

144. Id.
145. Id., p. 75.
both controversial and crucial in the context of utility applications for recovery of costs associated with terminated powerplant construction projects. The trend is to allow recovery of costs but not a carrying charge or return on the unamortized balance, although in a recent decision the Ohio Supreme Court read the requirement narrowly and denied any recovery for a cancelled nuclear plant. The focus in such cases is almost always on whether the expenditures were reasonable when made and whether they were clearly made for the benefit of the ratepayers.

This issue provides further precedent for a broad reading of the concept of "utility service." The issue ought to be public benefit, not dictionary definitions of broad statutory language. The cases also illustrate that even expenditures made to build powerplants are not automatically allowable simply because they are for the general purpose of providing electricity. Some test of reasonableness applies which incorporates the responsibility to assess demand changes resulting from conservation. Thus, even in building powerplants, utilities have an obligation to consider conservation.

In summary, the precedents set by the lifeline, R&D, and economic development programs support the view that the nexus between conservation activities and the delivery of electricity services need not be direct or precise. Moreover, social considerations such as assistance to the poor or economic development will also lend support to conservation measures. However, specific conservation activities may still run afoul of jurisdictional limits as discussed below.

D. CONSERVATION SUBSIDIES

The jurisdictional basis for conservation and solar subsidies has been challenged in several cases. Perhaps no issue better illustrates the significance of a conceptual starting point. The more "utility service" is viewed as synonymous with electricity, the more likely it is that conservation financing will arise jurisdictional issues.

A recent example of such arguments is a contested utility financing program proposed in the District of Columbia. In its brief, the utility

148. In the matter of the application of Washington Gas Light Company and Potomac Electric Light Company for approval of tariffs fixing charges for residential energy conservation audits, formal case No. 743 before the Public Service Commission of the District of Columbia (Initiated June 27, 1980).
properly notes that "the only 'service' encompassed by, and therefore regulable under, the Public Service Commission Law, is a public utility service." However, the company then makes a tenuous distinction, arguing that "[t]he lending of money is not a public utility service, and could be construed to be a public utility service only in the circumstance that loans were essential to the sale of electricity in the District of Columbia. This circumstance does not exist." The problem with such emphasis on the concept of "utility service" is that it goes too far.

We have argued that the issue cannot be answered in terms of whether or not an activity is "utility service." Advertising, economic development, and research are equally unlikely candidates for some narrow definition of "utility service." The issue is whether these activities bear a sufficient nexus to the delivery of reliable, low-cost electricity to justify the exercise of jurisdiction. As the analogies suggest, lending money for the purpose of financing residential conservation measures can easily be shown to impact the quality of service more directly than many accepted precedents.

In another interesting twist on the jurisdictional issue, several Iowa utilities, ordered to implement a loan program for their residential customers, argued that there is a distinction between "jurisdiction" and "authority." The utilities challenged an Iowa Commerce Commission order mandating a loan program for residential customers. According to the companies, "jurisdiction" refers to the power to rule upon cases presented to the Commission in its quasi-judicial role, whereas "authority" refers to a more general power to direct a specific activity, even in the absence of a specific proposal. The Commission has the "jurisdiction" to review conservation proposals, they argue, but not the "authority" to initiate specific programs. Charitable contributions are cited as an analogy; the Commission may disallow charitable contributions but may not direct them.

One problem with this argument is that the words in question must be attributed a precision found neither in the statute nor the dictionary.

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152. Id., Petitioners' Brief, pp. 32-37.
153. The Iowa Code specifically grants the Commission jurisdiction to "promote the use of energy conservation strategies..." IOWA CODE § 476.1, as amended. The utilities characterized this language as limited to voluntary programs since the statute does not use mandatory language. Id., Petitioners' Brief, pp. 36-39.
154. Id., p. 33.
Both use "jurisdiction" and "authority" virtually interchangeably.\textsuperscript{155} The agency also pointedly noted the lack of any precedent for the distinction.\textsuperscript{156} The argument breaks down entirely upon reflection. While utilities are entitled to a range of managerial discretion which might include such matters as the choice of suppliers or insurance companies for their employees, they are also \textit{obligated} to provide reliable and adequate service, and commissions are responsible for defining these terms. A utility \textit{must} undertake those steps found to be necessary for adequate and reliable service or face loss of its monopoly franchise.\textsuperscript{157} There is no question that a commission may refuse to authorize a nuclear plant on the grounds that a coal-burning plant is less expensive, even though the latter was not proposed by the utility. Similarly, a commission concerned that the failure to initiate new capacity would endanger future reliability would hardly be fulfilling its duties if it sat back and awaited utility proposals. The adequacy and reliability of service—and measures necessary to achieve those objectives—are hardly matters of managerial discretion. They indeed lie at the heart of commission responsibility.

\textbf{E. CONSERVATION RATES}

Because rate regulation is without question a proper commission function, there should be little issue concerning commission jurisdiction to structure rates in ways designed to promote conservation. There may be questions about discriminatory impacts of such rates, or about the reasonableness and evidentiary support for them, but not about commission jurisdiction. However, not all courts agree.

In a recent decision, the Ohio Supreme Court overturned a rate structure which included a penalty for violation of a quota on natural gas use.\textsuperscript{158} The quota and penalty were designed in response to a short-term shortage of gas. The Court ruled that the penalty amounted to an effort to regulate gas \textit{users} rather than utilities and that it therefore fell outside commission authority.

The Court's reasoning is facile. As discussed above, commissions have always had the authority to allocate limited supplies. An allocation

\textsuperscript{156.} See Colton, note 155 above.
\textsuperscript{158.} Ohio Manufacturers' Assoc'n v. PUC, 46 Ohio St. 2d 214, 346 N.E. 2d 770 (1976).
scheme is no more a regulation of customer behavior because it includes a penalty. The distinction between a "penalty" and a much higher rate for use in excess of the allocated amount—a system effectively similar to a lifeline rate—is also hard to understand. A penalty for theft of power is just as much a regulation of the end user; so is the choice of declining block rates over inverted rates. So long as a rate structure is based on reasonable evidence and cost of service is taken into account, it should not fall outside commission authority.

While peculiarities of state statutes, such as specific delegations of authority to other agencies or limitations on commission jurisdiction, may preclude the adoption of conservation programs, jurisdictional issues should not otherwise be a significant obstacle. Conservation is clearly related to the objectives of "utility service" unlike contributions to trade associations or other activities that have been disallowed.

Utilities and utility regulation have always been evolving. From local companies providing lighting at one price, utilities gradually became huge multistate enterprises providing a variety of services for an equally wide variety of prices. The concept of "utility service" had to be stated broadly in state statutes, for it never had a precise meaning. Subsequent legislation until recently tended more to exclude certain expenditures, such as advertising and promotional expenditures, than to include new ones. Conservation legislation, such as provisions concerning rate reform and financing of home insulation, has in most cases been necessary because of commission inaction rather than lack of authority.

There clearly are limits to commission authority. The lifeline cases and research and development cases suggest the appropriate principle: utility expenditures should bear some reasonable relationship to cost of service (or should at least not be inconsistent) and must be directed towards providing a material benefit to the ratepayers. But no benefit can come from over-emphasizing the meaning of "utility service" to exclude alternatives at the customer's end of the line. The true intent of utility franchises is to facilitate the delivery of energy services, not to provide gas, electricity, or steam, which are only means to an end.

VI
CONCLUSION

The foregoing discussion supports two essential points, which in turn require a small but important set of qualifications to be seen in proper perspective. Conservation energy programs, contrary to some
objections, fall well within the mainstream of generally accepted regulatory principles as expressed by the doctrine of the utility's duty to serve, the prohibition against unjust rate and service discrimination, and the statutory limits on the regulatory jurisdictions of utility commissions. This conclusion reflects the historical dominance of the public service obligation model of utility regulation, as opposed to the natural monopoly perspective.

The first qualification is that this general overview of regulatory principles cannot, in the specific case, substitute for careful scrutiny of the governing law of the regulatory jurisdiction in question. Utility commissions are creatures of legislation, and it remains quite conceivable that the doctrinal developments of specific legislation could operate to disable specific conservation energy programs. At the least, however, the analysis presented in this article should serve to shift the burden of persuasion to those who would argue for such an out-of-the-mainstream conclusion.

Second, uncertainties about the applicable law in specific jurisdictions may prompt those interested in exploiting the conservation energy resource to press for amending legislation to place conservation energy programs by utilities on firmer legislative ground. Even where such uncertainty is not pressing, legislation reflecting the policy judgment of the state can facilitate initiatives by utility commissions and make the policy directions of the jurisdiction apparent to all interested parties. The strategic value of legislative clarification is, however, a double-edged issue. Carelessly drawn legislation may serve to cloud commission power which may, upon reflection, be clearer than supposed. It is essential that legislative action be bottomed on a firm appreciation for the possible consequences of tinkering with a reasonably well-settled set of principles.

Third, the conclusions of this article should not be read to ignore the difficulties and importance of designing conservation programs carefully. At the extreme, programs that do not rest on well-developed records and analysis may be remanded to the commission during the process of judicial review. The consequences can be costly delay in implementing otherwise valuable programs, as well as a potential stifling of private initiatives, while the dimensions of the utility program are being refined and reinstituted. But even short of the extreme situations, conservation energy programs are new ventures for utilities, utility commissions, and the consuming public. The programs' success depends on the accurate integration of the roles and reactions of each of these groups into the overall program. Careful analysis is required to determine proper subsidy levels in financing programs, to draw participation
criteria as broadly as is consistent with other program objectives, and to
ensure that program components do not have counterproductive effects.
An example of this sort of pitfall is the Tennessee Valley Authority’s
now-suspended insulation subsidy program. That program had the
effect of inducing builders to install less insulation in new dwellings than
was formerly customary or than was cost-justified because the first
owners of the building could retrofit insulation at a lower cost through
the utility’s partial underwriting of the program.159

Finally, the past is never more than prologue. The mainstream of
American regulatory principles may shift away from the public service
model and its underlying premises, so that conservation energy pro-
grams authorized by current doctrines may become heretical in the view
of the guardians of the new orthodoxy. Detailed defense of the public
service model will be the subject of another article. Such a defense may
help to ensure the validity of conservation programs now under con-
sideration. If a shift away from the public service obligation model takes
place, it will be an event too significant to escape our notice. Until then,
conservation energy programs should be pursued with a confidence in
their present legitimacy.

159. “Conservation: Loopholes and Care Packages,” Electrical World, January 1981,
p. 31.

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Table 1
Note: Table accompanies Footnote 89.