

Assessing Impacts on Small-Business, Residential and Low-Income Customers

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Introduction

Everyone seems to be talking about the coming competition in the electric industry; and everyone seems to agree that when it comes, it will have profound impacts on the customers of electric utilities. The question remains: precisely what impacts will arise and for whom? The answer, of course, depends on the type of competition being discussed.

Evaluation of the impacts arising from competition in the electric industry also depends on the types of customers being considered. Small-business customers, residential customers generally, and low-income customers in particular are not well-positioned to take advantage of competition in the electric industry.

The impacts on these customers are less likely to be positive, and more likely to be negative, than are the impacts on large industrial customers.

Positive impacts are less likely to arise because small-business and residential customers are simply not big enough for competitors in the electric industry to aggressively solicit; nor do these customers wield enough economic power to insist on being considered. At the same time these customers are being written out of the economic equation, the concerns that are often unique to them are being ignored as well. Many of these concerns-universal affordable service and fundamental procedural fairness in service terminations are among the obvious ones-are grounded not in economics but in social and political ideals that will be lost in an industry driven solely by economic and competitive considerations.

In other words, there can be no uniform answer to the question of what impacts a competitive electric industry might have unless the question specifies both the types of competition and the types of customers. Therefore, the focus of this analysis is the impacts of competitive electric industry on small-business, residential and low-income customers.¹ The analysis further seeks to evaluate the impacts of each of three different types of competition: (1) competition at the retail level, (2) competition at the wholesale level, and (3) an electric industry marked not so much by competition as by performance-based rates and industrial discounts.²

Specifically, the analysis will seek to accomplish three tasks:

- Identify the harms and benefits arising from the different types of electric competition;
- Assess the relationship between those harms and benefits and the three types of competition; and
- Where appropriate, recommend what state regulators and legislators might do to mitigate the adverse impacts and to promote the beneficial ones

The analysis is presented in three parts. The first part identifies the adverse consequences to small-business, residential and low-income customers arising from a competitive electric industry. The second part identifies the benefits from competition that may arise for small-business, residential and low-income customers. The third part assesses the extent to which harms and benefits can be expected to arise given different competitive scenarios in the electric industry. Policy recommendations are made throughout the analysis and are summarized in appendix C.

Electric Competition and the Concerns of Small-Business, Residential and Low-Income Customers

Significant concerns exist that a competitive electric industry will hurt small-business, residential and low-income customers. The potential harms can be categorized as threats to affordable rates, a dilution of credit and collection protections, a general retreat from maintaining quality service, and a refusal to consider noneconomic factors in the management of a market-driven industry.

Overview

Concerns about how electric industry restructuring will affect small users find their genesis in the fundamental nature of the electric industry. There is a group of industries in the United States called "industries affected with the public interest."³ These industries are special to the American economy. Because of their status, these industries have special powers conferred upon them such as the right to exercise eminent domain. At the same time, however, they also have special responsibilities, such as the responsibility to promote universal service. The electric industry has always been considered one of these industries affected with the public interest.

There has been considerable debate, however, over what elements categorize an industry affected with the public interest. The U.S. Supreme Court was not helpful when, in 1914, it said simply, "The underlying principle is that business of certain kinds hold such a peculiar relation to the public interest that there is superinduced upon it the right of public regulation."⁴ One academician came closer to an explanation when he defined the electric industry in particular as an "infrastructure industry." He stated, "This means that it is a major element in the 'underlying foundation or basic framework' of the economy and our very culture."⁵

Using this definition, one can begin to understand why the electric industry, even if it is competitive, is fundamentally different from other local industries: The production of widgets does not go to the basic foundation of our economy; the production of electricity does. Electricity touches every aspect of our economic life and well-being in a way no other industry does. That is why the electric industry, from generation through distribution, competitive or not, is seen as an industry affected with the public interest. As a result, the electric industry has been given greater responsibilities to the public than the local grocer, car dealer, or other business.

Enforcing the public responsibilities of the electric industry was relatively straightforward when the industry was a regulated monopoly. Today, however, the question is whether the electric industry, given its public-interest nature, can engage in robust competition while at the same time fulfilling its public responsibilities, especially to small-business and residential customers generally and to low-income customers in particular. The challenge for policymakers is to permit the competition while enforcing the public-interest responsibilities.

Identifying the Concerns of Small Commercial, Residential and Low-Income Consumers

Affordable Energy

Affordable energy is a primary concern of small-business, residential and low-income customers.⁶ Given the public-interest nature of the electric industry, affordable electric service should be provided to all who seek service, pay for it, and comply with the reasonable rules of the service provider.

Most people contemplating the problems created by unaffordable home energy think of winter heating bills. The almost universal adoption of restrictions on winter utility shutoffs indicates that the harms of unaffordable winter bills are well recognized.⁷ However, the loss of utility service during the summer can be just as harmful as the loss of winter heating service. In fact, heat is a substantial contributor to death tolls in even average summers.⁸ The affordability of electric service is thus a year-round concern.

Each time a person walks into a heated room, eats food that has been refrigerated, or uses a light or television, that person is relying on electricity.

Unaffordable electric service is both inconvenient and dangerous. It is no wonder that the potential loss of affordable electric service for heating and cooling and for running appliances is the foremost concern of most small-business, residential and low-income customers.

Gaming the System

Closely associated with maintaining the affordability of energy is preventing large electric customers from "gaming the system" to the detriment of the less powerful small-business, residential and low-income customers. Electric industry actions that consider the affordability of electricity only to the types of customers for whom there is active competition will likely result in additional costs to the remaining customers.

A classic example of gaming the system is the recent conflict between Raytheon, a major defense contractor, and Massachusetts Electric Company. In response to Raytheon's threats to leave Massachusetts, the local electric utility offered the company rate discounts of 20 percent and more for five years, with lower discounts in subsequent years. Raytheon refused the offer, arguing that the deeper discount should last longer. Given the need of the utility to recover its total cost of service, each dollar of discount provided to Raytheon is a dollar of increased costs that must be paid by those not receiving the discount.

The price breaks offered by utilities in response to threats by industrial companies to leave an area would be of little concern if they were isolated events-but they are not. In Massachusetts, for example, Boston Edison reported that it was ready to offer huge price breaks to more than a dozen companies through a proposed Manufacturing Retention Rate program filed with the state Department of Public Utilities.

The utilities that offer these price breaks and the industries that receive them argue that the remaining small-business, residential, and low-income customers benefit too. Without the discount, the argument goes, the entire industrial load would be lost to the system, as would any financial contributions that load would have made to the fixed costs of the system. The argument posits, in other words, that as long as the company paying a discounted rate makes some contribution to fixed costs, other customers benefit by retaining that company.

The existence of industries that cater to customers that are large enough to attract competitors, and thus large enough to exercise some degree of market power, is not new. In the 19th century, railroads frequently offered advantages to large shippers that were not also offered to smaller shippers. Charging higher rates to customers that lacked bargaining power, however, was considered an abuse of the railroad industry's status as an industry affected with the public interest and was eventually prohibited.

Just as those small shippers in the 1800s lacked both the resources and the ability to make competition

work for them, small business and residential electric customers today lack the resources and ability to make competition in the electric industry work for them.⁹ Even if competition exists in the electric industry as a whole, there is no multiplicity of sellers engaged in active competition for the business of low-use consumers. Whether it is price discounts, innovations in services, or improvements in service quality, the beneficial impacts of a competitive electric industry will flow to large customers for whom competition works. Conversely, whether it is price increases or lapses in service quality, the adverse impacts will flow to small customers, for whom competition does not work.

Industry-Funded Energy Efficiency

A third concern of small-business, residential and low-income customers is the continuation of investments by utilities in energy-efficiency programs for small users. Such programs are often designed to address market failures that prevent small users from making an optimum investment in energy-efficiency measures. A classic example of such a market failure is the inability of small users to obtain conventional financing for energy-efficiency improvements. Losing programs that help overcome these market failures would seriously interfere with the ability of small users to improve the energy efficiency of their businesses and homes.

Small-business and residential customers worry that energy-efficiency investments by electric utilities will be eliminated in the face of real or perceived competition. That is, electric utilities not only will avoid including the direct costs of energy-efficiency programs in their rates when competitors do not have similar costs but will avoid increasing rates to make up for the lost fixed-cost contributions that would have been obtained from the kilowatt hours no longer used because of reduced consumption. Moreover, because of issues unique to small-business, residential and low-income customers-including higher transaction costs and lower savings potentials-the concern is that energy-efficiency investments for the customers needing them the most will be the first to disappear.

The Consideration of Equity in Prices and Services

Small-business, residential and low-income customers are also concerned about equity in electric industry decision-making.¹⁰ Equity exists at two levels. First, equity involves ensuring procedural protections of service to small users. Providing adequate notice prior to the denial of service, ensuring an opportunity to contest a denial of service and requiring a rational nexus between the reason for denial and the service itself are all examples of procedural protections. Second, equity involves substantive protections of service to small users. Deferred-payment plans through which arrears may be retired over time and protection from the disconnection of energy service during extreme summer or winter weather are examples of substantive protections.

These protections find their support in the concept of fundamental fairness rather than in economics. The idea of fairness comes from the political ideal of fair dealing, not from any notion of economic efficiency enforced by a competitive marketplace. Thus, ensuring that the actions of utility companies comply with fundamentally fair procedures and principles is not guaranteed by a competitive market.

A Commitment to Universal Service

Yet another concern of small-business, residential and low-income customers is that a competitive electric industry would not fulfill its responsibility as an industry affected with the public interest to provide universal service. Universal service is a social goal for essential public services. As a reasonably affluent society, we have determined that services such as housing, telecommunications, energy, water, banking and insurance should be universally available.

Moreover, there is a value to society as a whole from ensuring universal electric service. Unaffordable electric service imposes costs on the public unrelated to the service itself, including adverse impacts on housing quality, neighborhood preservation and even childhood education. Given that the costs are public, however, competitive firms will not necessarily seek to ensure universal service on their own.

Redlining

Closely associated with the issue of universal service is the issue of redlining-geographic discrimination wherein a company either refuses to serve, or fails to serve on equal terms, an area demarcated by racial or socioeconomic characteristics.. Although redlining is not historically associated with electric utilities, it would be reasonable to expect a competitive electric industry to engage in practices similar to those of other competitive industries-and such practices include redlining.

Redlining need not involve a refusal to serve altogether, as occurs with banks who refuse to make loans in minority neighborhoods. Redlining can be much more subtle. It might involve failing to make new services available in low-income and minority neighborhoods.¹¹ It might involve stricter credit terms for customers in certain geographic areas. Redlining has been practiced by a wide array of retail establishments.¹²

Redlining is often an extension of the market-research and test-marketing practices of an industry. In the telecommunications industry, for example, the Regional Bell Operating Companies have come to believe that the households with the greatest disposable income are the most receptive and reliable customers for advanced communication services.¹³ Despite evidence to the contrary, this belief significantly affects marketing strategy.¹⁴ Even in instances where the telecommunications industry has expressed a willingness to extend services such as video dialtone to low-income and minority communities at some unspecified time in the future, the industry has failed to respond to the concern that these communities will be the last to receive the social and economic benefits of the information superhighway. The jobs, business opportunities and informational programming associated with this new infrastructure will thus serve to benefit only affluent communities, where the quality of life already exceeds that of the excluded communities.

The same concern applies to a competitive retail electric industry. Income and electric usage are directly correlated. Offering new services only to affluent communities or, conversely, disproportionately providing only limited services (such as prepayment meters or service limiters) to less affluent communities would constitute redlining in one of society's most fundamental industries.

Public Input into Decision Making

A competitive electric industry is likely to pay little attention to the process of decision making. The underlying belief of such an industry is that if the process is made better, the results of the process will be better as well. Process-oriented goals often have little to do with economic issues, however. They relate instead to social and political values.

The particular concern of small-business, residential and low-income customers is the lack of input into decision making about the provision of essential public services and the allocation of substantial public resources.¹⁵ The need for public participation in decision making has become greater as the stakes have increased: the offer of services to entire segments of the population and the commitment of billions of dollars to one economic endeavor rather than another, for example. The decisions made by electric utilities affect the diverse interests of all of society, including customer interests, environmental interests, business interests and government interests.

The board of directors of a private corporation has neither the incentive nor the ability to consider these diverse interests. For the various interests to be represented, a broad spectrum of participation is necessary. Whether economic efficiency should be sacrificed to some extent (or to what extent) in order to provide high-quality rural electric service to Native Americans in Utah, for example, is a decision that should not be left to middle-class executives in New York or Atlanta.¹⁶ To the extent that competition in the electric industry does not allow for the type of public participation dictated by the magnitude of the decisions being made by national and multinational corporations, small-business, residential and low-income customers will be the losers.

Environmental Impacts

Environmental impacts are often public costs that cannot reasonably be expected to be accounted for in the decision making of a competitive firm. To the extent that the mitigation of environmental degradation is mandated by statute or regulation, the environmental costs are internalized. To the extent, that such mitigation is not mandated by law, however, may not be considered in a competitive environment.

The environmental impacts of the electric industry can negatively affect small-business, residential and low-income customers in any number of ways. They may involve the physical taking of property for facility location; the splitting of neighborhoods by transmission lines; the creation of noise, air and water pollution associated with generating plants or the exposure to electromagnetic fields. In addition, aesthetic impacts are often found to have little or no economic value.

Summary and Conclusions

The move to a competitive electric power industry will likely have significant adverse effects on small-business, residential and low-income customers. Among these effects will be the abandonment of many of the political and social objectives now pursued by the electric power industry. Such a change is contrary to the public interest. Even if the electric industry becomes competitive, it will remain an

industry affected with the public interest. Accordingly, public policy must be developed to mitigate the adverse impacts of competition.

Potential Benefits of Electric Industry Competition to Small-Business, Residential and Low-Income Customers

Not all the impacts of a competitive electric industry will be adverse to small-business, residential and low-income customers. Beneficial impacts may arise in the form of reduced prices and the rewriting of the electric industry's "social compact." Other benefits might include the innovation that competition presumably would spawn.

Reduced Prices

The move to a competitive electric power industry may well result in significant price reductions to small-business, residential and low-income customers. These reductions could arise from three related factors:

1. A major purpose of competition is to allow electricity from less expensive generating plants to reach consumers. This allowance may involve power plants that currently exist, albeit not on the local utility's system; or may involve new modular plants developed with today's less expensive technology.
2. The fuller integration of the generating system may allow the electric industry as a whole to build fewer power plants. This would happen because each utility would not need to build capacity sufficient to meet its own peak demand. The regional coordination of the power supply, in other words, could allow one utility to use a power plant today and a different utility to use the same power plant tomorrow.¹⁷ This scenario would cut costs in two ways. On the one hand, it would allow electricity providers to build fewer power plants. As a result, there would be fewer costs to pass on to consumers. On the other hand, the costs that would be incurred would spread over a larger number of kilowatt hours. As a result, the per-unit cost of electricity should decrease.
3. A competitive electric industry may render obsolete the traditional methods of allocating utility costs (see appendix A for details of those methods). Historically, the electric industry has allocated substantial costs to small-business, residential and low-income customers. Given a different costing method, these customer groups could see substantial price savings.

Rewriting the Social Compact

Throughout the years, there has been a "contract" between society and public utilities known as a social compact.¹⁸ The most basic part of the social compact involves the public utility's "duty to serve." A fundamental requirement of this duty is that the utility serves on reasonable terms all those who desire the service it renders. If a member of the public has applied for and made the necessary arrangements to receive service, and has paid (or offered to pay) the price and abide by the reasonable rules of the utility, it is the duty of the utility to provide the service. In short, under the "duty to serve," a utility must make

its service available to all members of the public to whom its scope of operation extends, who apply for such service, and who comply with its reasonable rules and regulations.

The move to a competitive electric industry provides an opportunity to rewrite the social compact. Although many people argue that parts of the new compact inhere in the existing one, the opportunity should be taken to make certain requirements explicit. The rewrite should seek to ensure that the interests of the industry's small-business, residential and low-income customers are considered equal to the interests of customers that are big enough and powerful enough to exercise both market and political power.

The new social compact should include four provisions, in addition to the traditional duty to serve. The compact would provide:

1. That, as part of an industry affected with the public interest, electric service providers do not operate strictly for private gain-that there is a public aspect to the industry.
2. That the electric industry has an obligation to make special efforts to ensure that electric service is universally available, even to those unable to pay for it.
3. That the electric industry is subject to public enforcement of the industry's public responsibilities.
4. That the electric industry owes the public at large its "best efforts" to comply with the public duties imposed on it; mere competence does not suffice.¹⁹

The Harms and Benefits Associated with Three Models of Electric Industry Competition

Now that the full range of harms and benefits that might potentially be imposed on small-business, residential and low-income customers by a competitive electric industry has been identified, it is necessary again to remember that not all impacts occur with all types of competition. For example, some impacts (positive or negative) may not exist at all, or may exist to a lesser degree, in a retail competition model as compared to a wholesale competition model. Because of these differences, the following discussion associates the identified impacts with specific models of competition.

There is an analytic process through which to determine the impacts of the three models of a competitive electric industry on small-business, residential and low-income customers. That process is explained in detail in appendix B. This section seeks only to apply that framework.

Performance-Based Rates and Industrial Discounts

Decision makers often believe that the best response to an uncertain situation is to do nothing in order to allow the situation to clarify itself. This belief is based on the assumption that the "do nothing" alternative is an available option. Unfortunately, that option is probably not available to the electric power industry today in the area of performance-based rates and special industrial discounts. Instead of preserving the status quo, doing nothing is an implicit endorsement of (or acquiescence to) a continuing proliferation of such rates and discounts. Retail wheeling limited to certain large customers can also be

expected.

The expansion of performance-based rates and industrial discounts that a "do nothing" policy would allow is contrary to the public interest in that it provides the least potential to offer small-business, residential and low-income customers competitive protections. In an electric industry structure with these attributes, retail distribution companies do not divest themselves of their generation and transmission facilities. Instead, the retail monopoly, marked by exclusive service territories, is retained. The industry structure is modified in that the granting of preferential industry retention rates is explicitly approved and the utilities themselves are allowed to adopt performance-based ratemaking schemes. Limited retail wheeling is also accepted.

This scenario is certainly worse than the present situation in most states. In recent years, an increasing number of states have been willing to adopt, or at least experiment with, affordable rate programs for residential electric customers.²⁰ However, electric utilities under this scenario are unwilling to experiment with affordable rates, and electric utility regulators have been unwilling to mandate such experiments. Similarly, to the extent that industrial discounts have been adopted, they have been of limited duration and have been subject to "defined showings"²¹ on the part of the recipient.²² Under the new scenario, these limitations will disappear.

Affordable Rates

From the perspective of affordable rates for small-business, residential and low-income customers, an electric industry structure allowing limited retail wheeling, special industrial discounts, and performance-based ratemaking is the worst possible structure. This structure provides both the incentive and the opportunity for the electric industry to harm small users without generating any of the identified benefits for them. For example, the electric industry could be expected to consent to value-of-service ratemaking contracts with industries and other large customers that might threaten to leave the system and to move to selective use of long-run marginal cost (LRMC) or long-run incremental cost (LRIC) principles for industrial and other large customers.

Value-of-service ratemaking involves pricing services on the basis of what the market will bear. It takes into explicit consideration the alternatives available to customers. If few alternatives are available, customers will be "willing" to spend more to retain service and prices can be set higher. Given the lack of alternatives for small-business, residential and low-income customers, the "value" of electric service is higher and prices are increased accordingly.

The selective use of LRMC or LRIC principles for industrial and other large customers is based on the theory that it is appropriate to minimize the extent to which rates for larger customers exceed their short-term variable costs as a means to keep those customers in the system. The result, however, is to allocate the fixed costs of the system to the remaining customers. As a result, the customers with inelastic demands would bear the largest share of costs, and the customers with more elastic demands would be assigned a smaller share.²³ Since small-business, residential and low-income customers have fewer alternatives, they also have fewer choices and thus less demand elasticity. They can therefore expect to see price increases even when the total costs of the utility remain stable or decrease.

From this perspective, an electric industry model allowing limited retail wheeling, special industrial discounts and performance-based ratemaking will generate greater threats to small-business, residential and low-income customers than will the retail competition model. The former creates an institutional framework in which the losses to small-business, residential and low-income customers are enforced by regulatory fiat, with no opportunity for these customers to avoid the harms. The vertically integrated monopoly industry, with the principles that accompany it, is maintained for these customers by law. When an electric utility loses revenue because of a move to value-of-service pricing, or LRIC pricing to large users, that revenue deficiency will, by regulatory fiat, be passed along to the remaining customers in regulated rates.

Gaming the System

As with affordable rates, and given the potential of large customers to game the system, an electric industry model that allows for limited retail wheeling, special industrial discounts and performance-based ratemaking presents the worst-case scenario for small-business, residential and low-income customers. The threat that in the absence of discounts the large customer will leave the system for alternative sources of power, expand facilities in a different service territory or suspend operations altogether leads the electric industry to argue that it is better for small-business, residential and low-income customers to receive at least some contribution to fixed costs over variable costs than to lose the large user and its contribution altogether.

Whether an industrial discount is justified on these grounds depends on the utility's ability to sort out the free riders. A free rider is an industrial customer that obtains a discount in response to a threat to leave but that, in fact, has not the ability, the desire or the intent to make good on that threat. In order for a discount to improve the well-being of ratepayers that do not get the discount, it is necessary for the sum of the contributions to fixed costs of all the participants that are not free riders to exceed the sum of the discounts to free-rider firms. To determine if this is so, there needs to be a sure way of determining how many free riders receive discounts. At present, however, there is no reliable way to make that determination and therefore no way to give discounts only to firms that are not free riders.

Gaming the system is an inherent part of any regulated monopoly situation. As long as there is a regulated revenue requirement that is allocated²⁴ among customer classes, the more powerful economic and political forces will seek to minimize their share while transferring cost responsibility to the less powerful forces. In this situation, small-business, residential and low-income customers will be harmed by gaming.

Equity Considerations and Energy Efficiency Improvements

In an electric industry that allows for limited retail wheeling, special industrial discounts and performance-based ratemaking, the argument will likely be advanced that any considerations not based on economics must be minimized in an effort to reduce rates so the electric utility can "remain competitive." As either an alternative or a complement to granting special industrial discounts, in other

words, the utility will argue that particular policy initiatives²⁵ will need to be abandoned.

The argument may have some basis. If an electric utility must bear an expense that would not be borne by an alternative fuel supplier or similar competitor, the utility is placed at a competitive disadvantage. Nonutility generators, for example, are not called on to include the cost of industry-provided energy-efficiency measures in their rates. In addition, with energy-efficiency in particular, the lost fixed-cost contributions associated with reduced systemwide consumption may cause rates to go up in the short term even as total costs go down. Each increment of the price increase will make the electric utility experiencing the increase somewhat less competitive.

A problem, however, arises when labeling replaces rigorous analysis in this regard. The assertion is made, for example, that the presence of a winter shutoff moratorium for residential customers increases rates to all ratepayers, despite the fact that research on the issue demonstrates otherwise.²⁶ The assertion is made that energy efficiency cannot be delivered in a cost-effective way to low-income customers; but it fails to take into account expense savings such as reduced working capital needs and reduced credit and collection expenses.²⁷ The assertion is made that affordable rate programs for low-income customers raise prices to all ratepayers, but it fails to consider whether such rate programs cover variable costs and provide some contribution to fixed costs.²⁸

Given the protections provided to the recovery of costs by electric utilities that remain regulated under an industry structure that allows for limited retail wheeling, special industrial discounts and performance-based ratemaking, there is no incentive for the utilities to engage in the rigorous analysis necessary to determine whether it is cost-effective for them, in a business sense, to pursue such programs.²⁹ Instead, every incentive exists for them to rely on claims that such initiatives represent "social" programs based in equity, not economics, and thus to reject programs such as rate discounts, energy efficiency, and shutoff protections.

Public-Policy Decisions and Initiatives

In light of the analysis just set forth, legislators and regulators should develop specific programs to mitigate the most serious adverse consequences associated with an electric industry structure that allows for limited retail wheeling, special industrial discounts and performance-based ratemaking. These programs should deal with at least three problems: rate affordability, gaming the system, and energy efficiency.

Rate Affordability. Policymakers should implement a three-part program designed to address rate affordability. This program should include the following:

- Explicit consideration of rate affordability in ratesetting. Electric utilities would be required to make their "best effort" to ensure affordable rates to small-business, residential and low-income consumers.³⁰ The failure to meet the best-efforts standard would result in a penalty to investors.
- Adoption of the principle that affordable rates will be considered cost-justified as long as the small-business, residential or low-income customers paying such rates pay their variable cost of

service plus some contribution to fixed costs. Since this test is the same test applied to industrial discounts, fixed and variable costs should be defined the same way

- Adoption of a methodology to explicitly consider the costs and benefits of affordable rates to at-risk customers. The benefits might include, for example, avoidance of the need for working capital associated with reduced arrears and avoidance of credit and collection costs.³¹ They might also include the advantages to the electric company of promoting economic development by sustaining and encouraging small-business development and neighborhood preservation.

Gaming the System. To control gaming of the system, policymakers can adopt a program in which economic development rates are reconceptualized and reconfigured. Such rates should not be viewed as discount rates. A utility offering economic development rates is acting as a financial intermediary, investing the pooled funds of ratepayers in projects that will presumably bring benefits to the utility, to the business receiving the discount, and to the public at large. The utility should recognize that the rates are an investment in economic development and should treat them as such. Under this approach, a discount rate would serve only as the mechanism for delivering the economic development incentive. An appropriate industrial discount rate program would include the following components:

- Creation of a discrete economic development "budget." By delivering such a budget through an economic development rate, a utility would define the total dollar amount of economic development investment it wished to make in any given period.
- Implementation of a process through which applicant industries wishing to take advantage of the economic development incentive would compete for a share of the economic development budget. The competition would be on the basis of the volume and quality of the benefits offered to the public, and the decision would take into consideration the quality of the proof offered. Since the resources available for the economic development rate would be limited, the utility would need to ensure that the public was deriving not merely adequate, but rather the maximum measurable benefit from its economic development rate investment. The total investment in economic development should be closed-ended. Accordingly, given the amount of money to be committed to economic development in a particular year, no firm would be automatically eligible for assistance; instead, all firms would compete for the limited incentive funds available.
- Establishment of the recourse a utility might have against a recipient of utility-financed economic development incentives if the promises made to induce the grant of such incentives were breached. The primary enforcement mechanism should be the utility's right to reclaim the economic development incentive if promised performance standards were not met. After the period of time during which the incentive was provided, the amount of the investment could be "forgiven" in increments over time as long as the designated performance standards were met.³²

Energy Efficiency. Public policymakers must acknowledge that competition—even in the form of an electric industry structure that allows for limited retail wheeling, special industrial discounts, and performance-based ratemaking—will have an impact on the delivery of energy efficiency to small-business, residential and low-income customers. Given the advent of competition in the electric industry, it is now necessary for utilities to do the following:

- Create new and innovative partnerships through which to deliver energy efficiency;
- Target their energy-efficiency programs to customers that can help lower utility expenses; and
- Develop programs that creatively use utility dollars to promote energy efficiency without spending those dollars.³³

The role for legislators and regulators in bringing all this about is to insist that utilities not abandon their energy-efficiency programs for small business, residential and low-income customers. Policymakers should make clear that one of the impacts industry competition should have on energy efficiency is to force electric service providers into joint ventures. For example, having low-income programs joint venture with agencies such as the federal Weatherization Assistance Program,³⁴ with housing developers,³⁵ and with financial institutions,³⁶ can provide substantial benefits. By pursuing joint ventures with these various institutions, a utility will increase its cost-effectiveness by (1) piggybacking its program on to the administrative efforts of others, (2) by avoiding the need to fund the entire cost of low-income energy-efficiency improvements itself, and (3) identifying and serving the needs of the populations most likely to be able to deliver the cost-control and revenue-stabilization benefits identified here.

A second role for legislators and regulators to play in bringing about the desired result is to insist that utilities abandon their view of low-income energy-efficiency programs as being strictly a resource acquisition strategy. Instead, they should view the delivery of energy-efficiency strategies to low-income households as a way of redressing the inability-to-pay problems, of low-income customers. This action is not simply a public-policy decision but is based on the economics of low-income energy-efficiency programs.³⁷

In short, an electric industry that allows for limited retail wheeling, special industrial discounts, and performance-based ratemaking should not abandon its energy-efficiency programs. Instead, it should have both the incentive and the opportunity to pursue significant innovations in the design, targeting and financing of energy efficiency for small-business, residential and low-income customers.

A Special Note on Performance-Based Ratemaking. Each state public utility commission has a duty to ensure that utility services are fairly provided and appropriately priced, particularly to the less powerful in society. If nothing else, it should stand as the arbiter of various interests. In its decision making, it should at all times balance the needs and interests of consumers against the needs and interests of the industry and its investors.

To the extent that performance-based ratemaking programs are adopted by electric utilities, this role of state regulators is reduced. Performance-based ratemaking allows a utility to price its services at its discretion, as long as the pricing remains within certain boundaries. Regulatory controls on rates of return are often abandoned or severely curtailed.³⁸ One purpose in adopting performance-based ratemaking is to reduce the role of state regulators so as to permit electric service providers more flexibility in responding to competitive conditions.

Several observations need to be considered in response to performance-based ratemaking programs.

First, as regulation is reduced through the implementation of such programs, the ability of the state to influence the public-interest aspects of the electric industry is reduced as well. Thus, it is critical that the policy options decision makers wish to put into place be implemented before a move to performance-based ratemaking is permitted. If protections for small-business, residential and low-income customers are appropriate, they should be made part of the initial approval decision.

Second, given the public-interest nature of the electric industry, it is inappropriate to create performance criteria based solely on economic considerations. For example, a specific performance-based criterion has recently been recommended for minimizing utility service disconnections.³⁹ Performance-based criteria have also been recommended for payment plans and for households in arrears:

- Payment plans. Unsuccessful deferred-payment agreements are one measure of a utility's performance in responding to its payment-troubled customers. Each time a household is unable to retire its arrears successfully through a negotiated deferred-payment agreement, the utility has failed to adequately assess the household's ability to pay. In this situation, the utility imposes not only a social cost on the household but a business cost on itself. The latter is the cost of either negotiating a new payment agreement or pursuing other credit and collection measures against the household. The rate of unsuccessful deferred-payment agreements of a particular electric utility should be compared with that of other electric utilities for a determination of the utility's performance in this regard. The successful completion of a deferred-payment agreement means the household retires its arrears without renegotiation of the agreement and without disconnection of service. Given the utility's mandate to enter into only reasonable deferred-payment agreements, virtually all such agreements should be successfully completed.
- Customers in arrears. Customers that do not make timely payments on their bills are an indication of the electric utility's failure to adequately address the payment troubles of its small-business, residential and low-income customers. When customers do develop past-due bills, the utility should either collect those bills immediately or place the customers in negotiated deferred-payment agreements. Customers that are in arrears to an electric utility but that have not entered into deferred-payment agreements represent a serious risk of loss to the utility. Customers in arrears that enter into deferred-payment plans lessen the risk that they will ultimately lose their utility service.⁴⁰

The success of a utility in getting its payment-troubled customers to cover their variable costs of service should be an element of any performance-based evaluation of credit and collection. Each local utility should adopt the explicit policy that customer service decisions should result in maximizing the number of customers that not only cover their variable cost of service but also make some contribution toward fixed costs. Performance-based criteria such as those given here should be adopted as part of any performance-based ratemaking proposal.⁴¹

Third, public policy should place a variety of limitations on performance-based ratemaking. One primary limitation is that performance-based rates should include periodic regulatory oversight and review. In addition, limitations on the use of a rate escalation index should be created. For example, many proposals set forth the Consumer Price Index (CPI) as the measure of inflation for making

adjustments in performance-based rates. Use of the CPI in recent years, however, would substantially have overstated increases in electricity prices. Moreover, even if the CPI is appropriate as a measure for operating expenses, it is highly inappropriate for capital costs, which do not vary year-to-year with inflation.

Similarly, within a performance-based ratemaking framework that allows for industrial discounts, public policymakers should include specific, enforceable conditions as part of the grant of such discounts.⁴² Two examples of such conditions are the number of family-wage/benefited jobs⁴³ created and the number of jobs per dollar of expenditure.

Fourth, a utility should not interfere with the market enforcement of efficiency in business operations through industrial discounts. As an illustration, suppose competitor A has squeezed all possible cost-effective energy savings out of its operation but competitor B has not. In this situation, competitor A will have a competitive advantage in prices offered to consumers. That is as it should be. If, however, the electric utility steps in to provide competitor B with an economic development rate, that subsidy will deny competitor A the competitive advantage the free market would have provided because of competitor A's efficient operation.

Fifth, a utility seeking to deliver economic development incentives should demonstrate that those incentives are being delivered to the areas most in need of economic development. Criteria for eligibility might include minimum standards for determining the level of economic distress of localities where businesses are eligible for such discounts.

Finally, the redistribution of economic activity should not be considered a "benefit" of an industrial discount. State public policy should provide that no assistance will be given for projects intended to facilitate the relocation of industrial or commercial plants or facilities from one area to another, unless state regulators find that the relocation does not significantly and adversely affect the employment or economic base of the area from which the plant or facility is to be relocated.

As can be seen, performance-based ratemaking will probably require as many regulatory resources as does the present system of rate-of-return ratemaking. On the one hand, the point is to get the incentives in the proper place and to have a regulatory regime that is compatible with a market-driven system. On the other hand, ensuring that quality of service is maintained and that customers are not made worse off by the new system will be difficult tasks to accomplish.

In sum, rather than drifting into any particular regime of performance-based ratemaking, decision makers must structure the system carefully. Regulatory decisions must be made and enforced if proposals for performance-based ratemaking are to work. Among the decisions to make are the particular factors on which performance is to be measured, the level of performance that is to be considered sufficient to trigger incentives and penalties, the measure of inflation to be used and the productivity index to use. Despite its support as an alternative to rate-of-return regulation, decisionmakers must realize that PBR does not make regulation simple if it is to work properly.

Summary

The problems during any transition from business as usual to a new industry structure are likely to be as bad as or worse than those of the various models of retail or wholesale competition. Since electric service companies may not yet have figured out the cause and effect benefits of serving smaller customers, potential self-moderating influences may not come into play. Although an industry marked by performance-based rates and industrial discounts may be the worst model in terms of its impacts on small-business, residential and low-income customers, a state could drift into this situation without being conscious that a significant change has taken place. Policymakers must understand that inaction under certain circumstances is not the safest option, since the result can be even more negative to small-business, residential and low-income customers than would making a less than optimal policy choice.

Moreover, if policymakers believe that the best scenario for their state is to promote an electric industry structure that allows for limited retail wheeling, special industrial discounts, and performance-based ratemaking, they will need to adopt specific policies to mitigate the worst effects of this structure on small-business, residential and low-income customers. Such policies should address rate affordability, energy efficiency, free riders, and inability-to-pay issues.

Retail Competition

The extent to which retail competition would give rise to various potential harms to small-business, residential and low-income customers depends on the type of retail competition permitted. On the one hand, small-business, residential and low-income customers may be negatively affected by a limited-competition model, in which large customers are permitted to leave the local system and small customers are denied the same opportunity. The significant harms associated with an electric industry structure that allows for limited retail wheeling, special industrial discounts, and performance-based ratemaking can be attributed to this retail competition model. On the other hand, under a comprehensive retail competition model, in which a multiplicity of firms engage in robust competition for all customer classes, small-business, residential and low-income customers may well reap substantial financial benefits of their own.

Affordable Rates: The Optimistic View

Substantial concern has been expressed over the impact of retail competition on the availability of affordable rates to low-income households. Such rates are often at less than embedded costs. A number of models of affordable rates exist.⁴⁴

Concern about the loss of affordable rates for low-income customers in a competitive environment stems from the belief that such rates are perceived as "subsidies" that cannot be cost-justified. Given the "subsidized" nature of these rates, the argument goes, a competitive electric industry will seek to forgo such "social costs," which might not be borne by their competitors. Many utilities have resisted the notion that affordable low-income rates can be good business. They insist that any type of discount is social policy that is best left to government funding.

Advocates of affordable low-income rates do not subscribe to the notion that these rates represent social subsidies that are not based on costs. Instead, they say, it is more cost-effective for a utility to provide affordable rates to low-income households in the first place than to provide higher rates accompanied by all of the expenses associated with nonpayment. Moreover, this reasoning continues, it is better for a utility to retain low-income customers at a reduced rate than to lose sales through disconnection, forced mobility or simple nonpayment. It is only because regulation permits a direct passthrough of all credit and collection expenses, as well as other expenses associated with nonpayment, that utilities can refuse to acknowledge the business problems raised by low-income customers' inability to pay.

To the extent that the electric industry becomes truly competitive, affordable rates for low-income customers should become more, not less, attractive. One impact of competition should be to enforce efficiency in the provision of electricity. If, indeed, affordable rates for low-income customers will lower costs, enhance revenues and, at a minimum, provide a contribution to fixed costs over variable costs, a competitive industry should be expected to seek out such rates.⁴⁵

Pursuit of Universal Service: More Optimism

The introduction of comprehensive retail competition in the electric industry should also create an interest in maintaining the viability of the small-business, residential and low-income customer base. This interest should arise because a competitive industry will translate what is now perceived to be strictly a social-policy decision (for example, to provide deferred-payment plans) into an economic issue as well. Preservation of the traditional obligation-to-serve commitment clearly affects the interests of small-business, residential and low-income customers. Over the long term, however, it will also affect large industrial and commercial customers.

Decisions about the location and expansion of industries are directly tied to the health of the residential base in a community. This is true for several reasons. First, as residential customers flee or are forced out of an area, commercial and industrial customers will go with them. This is particularly true for manufacturing companies and large retail commercial establishments. Second, location decisions for new and expanding industries often involve the availability of a quality workforce and quality educational system. If a utility is to preserve its large-industry customer base in the long term it must take care to preserve its small business and residential base as well. A competitive electric utility that wants to act in its own best long-term interest will implement policies to promote universal service.

In sum, electricity providers that argue of a need to court large industrial customers at the expense of small users may in fact be acting in an economically irrational manner. Urban planners and economic development specialists have found that the long-term economic survival of an electric utility depends as much on taking care of the community as it does on taking care of the large industrial customer. Accordingly, over the long term, competition may create an incentive for electric utilities to take an active interest in preserving the health of their small-business, residential and low-income customers. The presence of comprehensive retail competition should translate what has historically been a question of political power, regarding which costs are allocated to which customers, into an economic question of how to preserve the community. Utilities anxious to maintain their industrial and commercial customers

should therefore seek to maintain the community necessary to support those customers.

Universal Service: The Pessimistic View

There is an ominous side to the potential for a competitive electric industry to recognize and act on its own economic interest. A concern of small-business, residential and low-income customers is that a competitive electric industry, acting only in its economic self-interest, will scale back its traditional obligation to serve and abandon any pretense of pursuing the goal of universal service-that, for example, utilities will simply refuse to help customers having difficulty making their payments. This concern is based in reality. Southern California Edison has tripled its service disconnections (to one-half million customers in 1995 alone), citing competition as the main reason it was calling in debt.

Given the Southern California Edison approach, what small-business, residential and low-income customers can expect is a reduced level of tolerance for the inability to pay. Stricter, not smarter, credit and collection approaches will be the rule. Efforts to scale back such protections as winter shutoff moratoriums will be initiated. And a refusal to acknowledge the economic, let alone the social, impacts of the potential loss of essential electric service will be the norm.

This dark side of competition can arise either because the need for comprehensive competition has not been fulfilled or because the industry is in transition and where market mechanisms that would penalize utilities using such economically irrational collection strategies as that followed by Southern California Edison have not yet been developed. In the meantime, however, irreparable harm to both individuals and institutions can be expected to occur.

Affordable Rates: The Pessimistic View

As discussed earlier, the primary threat to affordable rates for small-business, residential and low-income customers is the direct reassignment of costs from customers for which there is active competition to customers for which there is not. This reassignment can be explicit, as in the process of entering into special contracts, with the revenue deficiency picked up by the remaining customers. It can also be subtle, as in basing prices for some customer classes on incremental costs, with the revenue deficiency assigned elsewhere.

Adverse impacts on affordable rates in a competitive retail electric industry can occur in several other forms as well, including geographic diverging, unbundling of services and redefining the characteristics of customer classes:

Geographic diverging could be used to lower rates to particular markets. Through geographic diverging, prices would go down in higher-density areas with lower per-unit costs and would go up in lower-density, primarily rural, areas. The price adjustment would be based on the argument that the utility needs to remain competitive in urban areas, where competition is more intense, alternatives are more plentiful and usage is more elastic.

Unbundling of services for pricing purposes can also be expected to impose higher prices on many in a competitive retail industry. Such unbundling would involve imposing discrete charges for services whose cost previously had been rolled into basic rates. Examples are charging for inquiries about customer accounts, charging for field collection calls and charging for voluntary temporary service disconnections. Again, the price adjustment would be based on the argument that the utility needs to remain competitive for those customers not using each particular "service."

Redefining the characteristics of customer classes will also lead to price increases for many in a competitive retail electric industry.⁴⁶ No reason exists to treat all small users as a single class. Although some utilities have a general service rate, others have a multitude of rates simply for residential customers. Legal nondiscrimination doctrine requires only that all customers similarly situated be treated the same. It is largely up to the electric utility, however, to define which customers are similarly situated. Differential pricing based on an expanded number of classes, with some customers charged more and others less, should be expected.

Innovation in Energy-Efficiency Partnerships

Under appropriate circumstances, the introduction of competition into the electric utility industry should create incentives that enhance the industry's interest in providing energy efficiency. The methods, however, may not be those the industry historically has used. Historically, each utility itself has both installed and funded energy-efficiency measures. In contrast, a competitive industry can be expected to seek out and implement innovations to capture the benefits of low-income energy efficiency to low-income customers without having to bear the historical costs.

An inventory of potential utility partnerships would include institutions such as state and local housing finance agencies, state and local land trusts and community development financial institutions. The number of units that can be reached through such partnerships is tremendous. Consider the following two examples.

Local community development loan funds finance significant housing development. By 1993, 41 of these funds existed, with a total capitalization of \$100.1 million. From 1986 through 1992, they provided roughly \$450 million in loans, 44 percent of which went for the development of affordable housing. In the same period, they financed 18,476 housing units, 86 percent of which were "permanently affordable"⁴⁷ and 87 percent of which were affordable to low-income tenants. Each year, the investments of community development loan funds have grown, from \$20 million in 1986 to \$120 million in 1992.

State housing trust funds are permanent capital pools that offer a continuing source of financial assistance to support the creation and preservation of affordable housing. As of 1993, 37 states and the District of Columbia had housing trust funds. It has been estimated that these funds have collectively provided more than \$780 million in funding for 80,000 housing units, and have leveraged more than \$2.25 billion in funding from other sources.⁴⁸ Generally, state housing trust funds function as revolving loan funds, making loans and recycling loan repayments to make additional loans.

In general, state activity in the provision of affordable housing has been dramatic. Before 1980, only 44 state-funded housing programs existed. From 1980 to 1987, however, an additional 112 programs were created; and from 1988 through early 1990, an additional 65 programs were developed. Each of these programs represents a potential partnership for a competitive electric utility in providing energy-efficiency improvements.

Gaming the System

A competitive retail electric industry would create the same incentives for rate affordability as does an industry structure that allows for limited retail wheeling and special industrial discounts. It would, however, create fewer opportunities for gaming-the-system activities that threaten the affordability of rates to small-business, residential and low-income customers. If a competitive retail electric industry arises, political pressure, if not economic pressure, will extend the ability of all classes of customers to take advantage of that competition.⁴⁹

Within this framework, the retail competition model would, at least theoretically, be better for small-business, residential and low-income customers than would an electric industry structure that allows for limited retail wheeling, special industrial discounts and performance-based ratemaking. Under retail competition, at least in concept, either there would be competition for all customers (including small-business, residential and low-income customers) or there would be pressure to create customer aggregators-entities or institutions who are designed to combine individual residential, small-business, or low-income customers into a group capable of negotiating and purchasing power in a competitive market-to seek out retail competitors for small-business, residential and low-income customers. In either of these situations, to the extent that electric utilities allowed large users to extort unreasonable discounts, there would be pressure for small-business, residential and low-income customers to leave the system.

Rewriting the Social Compact

A rewrite of the social compact will most likely occur in a retail competition environment. By definition, the social compact affects the relationship between the local distribution utility and the small-business, residential and low-income customers in their capacity as end users. (The provisions of a rewritten social compact were discussed earlier.)

It is not likely that a rewrite of the compact will occur in the context of an industry structure that allows limited retail wheeling, special industrial discounts and performance-based ratemaking. Such a model is based almost exclusively on the exercise of market and political power by large industrial customers. It preserves the status quo between the utility and its small-business, residential and low-income customers. That is, it preserves the ability of the utility to pass along increased expenses and lost revenues associated with either ignoring or mistreating these customer classes.

In contrast, retail competition might involve a structural change in the electric industry so substantial that a new social compact conceivably could emerge between the electric industry and its small-

business, residential and low-income customers. Retail competition would fundamentally change the institutional arrangements that have governed the electric industry. It would be unreasonable to assume that this restructuring would benefit only large user customers while keeping the restructuring issues which might benefit the small user customers off the table.

Some Caveats

The validity of most of the discussion of retail competition depends on honest reality checking, the one type which has to do with the nature of the competitive industry itself. For example, will there really be robust competition for retail customers? If so, a competitive electric industry should seek to embrace all economic efficiencies. Does competition really result in innovation? If so, a competitive electric industry should expect to see collection innovations similar to the service innovations flourishing in the telecommunications industry.

Reality checking will come at a program level as well. For example, will affordable electric rates really help reduce expenses and enhance revenues? If so, a competitive industry should embrace them. Are there really differences between categories of nonpaying customers? If so, a competitive electric industry should embrace the need to differentially address them. Are there really opportunities for cost and revenue advantages arising from low-income energy-efficiency partnerships? If so, a competitive electric industry should be expected to search for them.

Public-Policy Decisions and Initiatives

Legislators and regulators can develop specific policies to mitigate the adverse consequences of a retail competitive electric industry and to promote the beneficial ones. With regard to an industry structure that allows for limited retail wheeling, special industrial discounts and performance-based ratemaking, these policies should include at least a supplemental program promoting comprehensive retail competition, affordable rates and customer choices and preventing redlining.

Comprehensive Retail Competition. The best way for a competitive retail electric industry to protect its small-business, residential and low-income customers is for it to develop a mechanism that permits these customers to participate directly in the competitive purchase of electricity. Examples of such mechanisms are (1) the franchise competition being considered in Massachusetts, (2) the community bidding process advocated by some in California, (3) the increased municipalization of local distribution networks, and (4) the formation of municipal "purchasing pools" for electricity.⁵⁰

If the market is used for allocating costs, then one of the few policy options to keep larger customers from getting lower prices is to increase the market power of small users. Three methods exist to reach this goal. First, small users must be ensured some market power. Public policy promoting the aggregation of small users and providing incentives for the creation of public and private aggregators is necessary. Second, small users must be served early, not late, in the roll-out of competition. Proposals to initiate electric industry competition for large users, with small users to be brought in "eventually," should be rejected. Third, electric service providers must be given incentives to provide quality service

to small users. Specific public financial incentives to initiate marketing to small users must be developed.

If we assume that the market is able to create a mechanism to aggregate small-business, residential and low-income customers to compete at the retail level, the electric utilities will not be in a position to indiscriminately load costs, fixed or otherwise, onto these customers. This assumption, however, may bear no relationship to reality. To conclude: If there is no mechanism for allowing participation by small-business, residential and low-income customers at the retail competition level, a retail competition model will offer no advantages over an industry structure allowing limited retail wheeling and special industrial discounts.

Promoting Affordable Rates. Public policy can promote the economic provision of affordable rates to small-business, residential and low-income customers. This policy would involve at least two steps. First, it should require that utilities rigorously evaluate all the economic benefits associated with affordable rates, using tools such as "net back" and payment-pattern analysis.⁵¹

Second, it should promulgate the rule that, as with industrial discounts, as long as affordable rates for small users cover the variable costs of providing service to those users and make some contribution to fixed costs, the rates will be acceptable.

In addition, public policy should explicitly state that the electric industry is an industry affected with the public interest and that it therefore has an obligation to use its best effort to ensure affordable service. Finally, public policy should prohibit geographic diverging of rates, prohibit the unbundling of service charges unless the unbundling is supported by some demonstrable social policy, and strictly regulate customer class definitions to prevent unfair discrimination (either explicit or de facto) as well as deceptive acts and practices.

Promoting Customer Choices. Another approach to providing affordable rates is to promote a variety of choices in the services to which customers subscribe. Traditional unlimited electric service with billing afterwards need not be the sole choice. Consider the following two variations.

In London, hundreds of thousands of residential customers use prepayment meters. Many U.S. advocates for low-income customers are leery of prepayment meters, since such meters do not address the underlying inability to pay. The meters may be acceptable, however, to low-income interests if they are properly implemented. In fact, if the offer of prepayment meters is accompanied by an adequate discount, such meters may offer an appropriate mechanism for low-income households to control their home energy bills. Discounts of this sort can be justified on two grounds. First, prepayment meters constitute less service and should therefore be accompanied by a lower charge. Second, prepayment meter customers impose fewer costs on the utility system and should therefore receive lower rates.⁵²

A growing practice in the United States is to offer "service limiter adapters." The technology of the adapters is simple. For electric service, the adapter is inserted between the electric meter and the electric socket. It contains a circuit breaker which is tripped when the usage limit is exceeded. An external reset button allows the customer to restore service after cutting back on usage.

Both prepayment meters and service limiter adapters are objectionable if they are used strictly as a bill collection strategy since they do not address the underlying inability to pay of low-income households. In fact, they tend to hide the inability to pay rather than seeking to deal with it. Moreover, as collection devices, prepayment meters and service limiter adapters violate important procedural safeguards to protect consumers against unnecessary service terminations. Specific public-policy decisions prohibiting the use of these technologies as collection devices would be appropriate.

However, if they are accompanied by a substantial discount, prepayment meters and service limiter adapters can be a viable option that any customer may choose to purchase. These technologies might, in other words, be posited as a new form of "limited service" for energy users similar to local measured service in the telephone industry. Because service limiter adapters radically alter the usage patterns of both electric and gas customers, their adoption should lead to a reduction in the cost of service for customers using them. Relevant considerations in this analysis can range from the basic quality of service, which is obviously inferior under the service limiter program, to the sophisticated notion that limiting customers' seasonable demands will have an effect on the probability that these demands will require a utility to use power generating plants which rely upon high cost fuels.

In sum, in responding to a competitive retail electric industry, policymakers can promote choice in more than simply the selection of service providers. Consumer choice in the type of service purchased also can help address affordability problems. Although technologies such as prepayment meters and service limiter adapters can never fully address the needs of low-income households, they nonetheless have a function within a certain niche market.

Preventing Redlining. In choosing which areas to serve or which service options to provide within an area, competitive electric service providers have the opportunity to engage in redlining. Policymakers can take active steps to guard against the invidious discrimination associated with such redlining.

Policymakers should make it clear that they will employ an "effects test" to prevent business practices that have a discriminatory impact on a class of people even if the utility's intent appears to be neutral. The effects test has been employed in federal statutes covering employment, housing, consumer credit, home loan mortgages and the like. It involves proven models for preventing discrimination.

In addition, policymakers should adopt disclosure requirements for competitive electric utilities in order to prevent redlining and the economic decline of communities with high concentrations of racial-minority or low-income customers. Such requirements can be closely modeled the federal Home Mortgage Disclosure Act of 1975.⁵³ Just as the public-disclosure requirements of the act enable regulators and the general public to objectively determine compliance with antiredlining safeguards, so, too, would such disclosure requirements work with a competitive electric industry.⁵⁴

A Note About Alternative Service Providers

This analysis assumes that, for all practical purposes, small-business, residential and low-income customers will continue to be served by local electric utilities.⁵⁵ High transaction costs will discourage

marketing to such consumers by alternative brokers. The cost of the time-of-use metering, which might be necessary under most proposals, will be high enough to prevent consumers from seeking alternative suppliers.

Service by local electric utilities will also be likely because, from the perspective of the industry, no significant alternative provider of electric service has appeared so far. In the absence of any significant alternative provider, the "MCI Power and Light Company," there will be no active competition for small-business, residential and low-income customers.

Moreover, from the perspective of the consumer, most small-business, residential and low-income customers are not actively engaged in a search for less expensive electricity. And even if they were, it is likely that the costs of the search (in terms of both money and time) would not be offset by the savings to be obtained. In this situation, it is far more likely that, even if consumers were given a choice among competitors, factors such as habit buying would influence purchasing decisions far more than would retail electric prices.⁵⁶

Finally, it is unlikely that any alternative electric service provider will have the infrastructure necessary for billing and collecting from small-business, residential and low-income customers. What can be expected at most is a system through which, even if competitive retail electric service is provided to small-business, residential and low-income consumers, transactions will be made through a system of billing and collection contracts akin to those between long distance carriers and local carriers.

In sum, there are significant barriers to getting alternative sources of electricity to small-business, residential and low-income customers. A major concerted policy response designed to overcome these barriers is needed.

Indeed, given the concerns of small-business, residential and low-income customers with regard to procedural and substantive equity considerations in the billing and collection context, it would probably be best for states to require that alternative providers selling retail electricity to these customers do so through the same type of billing and collection service (BCS) contracts that are prevalent in the telecommunications industry. These contracts would directly address several concerns.

The primary concern is that an electric utility faced with retail competition will scale back customer service protections in an effort to reduce costs and remain competitive with alternative service providers. If instead customer service must be uniformly provided through BCS contracts, with a service fee charged to recover billing and collection costs, this issue will no longer exist.

A second concern is that regulatory protections for payment-troubled customers would be scaled back, again on the assumption that the costs of those protections would be born exclusively by the local utility. Since similar costs would not be borne by alternative service providers under a retail competitive structure, the reasoning goes, the local utility would be placed at a competitive disadvantage. Accordingly, it would seek to scale back protections, and corresponding costs, to maintain its competitive position. As with the first concern, since the costs of regulatory protections would be rolled into the price of the BCS contract, the provision of service coupled with the fees received for the BCS

contract would eliminate this issue.

A third concern of small-business, residential and low-income customers is that the advent of retail competition would result in a dramatic reduction of energy-efficiency programs offered to these customers generally and to payment-troubled customers in particular. Again, the BCS model allows this issue to be addressed. The alternative service provider would have a financial incentive under this model to effectively target energy-efficiency improvements to its payment-troubled customers. Substantial research has found that energy-efficiency improvements lower bills and make them more affordable.⁵⁷ As a result, energy efficiency targeted to payment-troubled customers would help lower credit and collection costs, bad debt, working capital expenses, and other costs associated with nonpayment and delinquent payment.⁵⁸ The BCS process provides a ready mechanism to allow the local utility providing BCS to quantify these savings. If targeted energy efficiency will decrease bad debt and working capital costs, for example, the reduced expenses will be reflected in lower BCS contract payments. If energy efficiency targeted to payment-troubled customers will reduce credit and collection expenses, the reduced costs will be reflected in lower BCS payments. What the BCS process does, in other words, is allow the quantification of credit and collection expenses, since there must be some basis for the BCS charge; and convert those expenses into an explicitly avoidable variable cost to the alternative service provider.

In sum, this analysis assumes that in the absence of an "MCI Power and Light Company" provider, the local electric utility will continue to be the primary provider to small-business, residential and low-income customers. The analysis goes further, however, to conclude that, in a limited fashion, this structure is most appropriate as a matter of public policy. Should alternative service providers succeed in developing a customer base among small-business, residential and low-income customers, their services should be provided through an industry structure involving billing and collection service contracts similar to those in the telecommunications industry.

Wholesale Competition

Affordable Rates

An electric industry that is competitive at the wholesale level would seem to offer the most substantial advantage to small-business, residential and low-income customers. The purpose of promoting open access to the transmission system on a nondiscriminatory basis, after all, is to promote competition at the electricity generation level. In its Notice of Proposed Rulemaking (NOPR) regarding open access, the Federal Energy Regulatory Commission (FERC) was explicit in stating this purpose: "The Commission's goal is to encourage lower electricity rates by structuring an orderly transition to competitive bulk power markets."⁵⁹

FERC believes is that given open access, lower costs would be made available to all retail customers of an electric utility. Today, FERC says, it is the noncompetitive nature of the transmission network that denies consumers (including small-business, residential and low-income customers) such access: "We find that utilities owning or controlling transmission facilities possess substantial market power; that as

profit maximizing firms, they have and will continue to exercise that power in order to maintain and increase market share, and will thus deny their wholesale customers access to competitively priced electric generation; and that these unduly discriminatory practices will deny consumers the substantial benefits of lower electricity prices."⁶⁰

Given a competitive wholesale market, FERC concludes, consumers will gain the benefit of lower production costs at existing plants as well as at new generating facilities that involve new, lower-cost technologies. If this is true, small-business, residential and low-income customers will benefit from these lower prices along with all other customer classes.

This projection of cost savings assumes that wholesale competition will force existing high-cost generation to be removed from use. Implicit in this assumption is the further assumption that substantial amounts of less expensive capacity are lying unused around the country.⁶¹ It is possible that if significant excess capacity does exist, the assumption about the non-use of high cost generation might be true. If significant unused and less expensive capacity exists as excess capacity, however, it is not clear why it is not already on the market.

In the alternative under which cost savings for consumers are produced through existing capacity, the cost savings projected by FERC might arise through new lower cost plants. This projection, too, is necessarily based on several assumptions: (1) that new, lower-cost plants will be built; (2) that they will be owned and operated by firms willing to aggressively compete against existing plants with higher-cost capacity; and (3) that the losses in revenue suffered by owners of existing higher-cost capacity will not be charged to customers. Research too extensive to summarize here has concluded that these assumptions are not likely to be correct.⁶²

Instead, it is likely that there will not be substantial additions to the availability of less expensive capacity. To the extent that electric utilities successfully obtain capacity that is less expensive than what is available today, their success will mark not an absolute gain in economic efficiency but rather a geographic redistribution of the benefits of the less expensive capacity. Having one group of customers benefit from the purchase of less expensive capacity, in other words, will result in another group of customers being subjected to higher-cost electricity. In addition, it is reasonable to expect that many electricity producers will choose not to make their entire supply of capacity available. In an effort to guarantee a greater recovery of stranded costs, these producers will simply reduce the availability of lower-cost electricity that would be in competition.

In addition, if the electric industry evolves in the same way as the telecommunications industry, electricity producers will compete at the wholesale level solely on the basis of their variable costs. In contrast, new competitors would be forced to compete on their fully embedded costs. Therefore, it is not only possible but likely that existing electric producers will be able to force competitors out of the market. Finally, given the ability of electric power producers to allocate fixed and variable costs to different markets and services on the basis of their need to meet competition, the expectation that a significant competitive market in power generation will develop seems overly optimistic.

Even if the electric generation industry develops as assumed by proponents of wholesale competition, it

is not clear that a wholesale electric market will operate in the fashion postulated by these proponents. One major flaw in the theory of a wholesale competitive industry involves institutional arrangements that arise from the mandate that retail distribution utilities guarantee the availability of electricity at the time, and to the extent, demanded by their retail customers.

Because of this mandate, it is impossible to totally separate the retail market from the wholesale market. Retail companies, in other words, will be unlikely to rely primarily on spot-market purchases to meet the energy demands of their retail customers. To ensure the availability of power at all times, the market that develops will be a competitive wholesale market distinguished by the negotiation of long-term contracts, not one involving constant bargaining for least-cost power at any given time.

In this scenario, the long-term contract substitutes for vertical integration of the generation and distribution utility, with three results. First, the distribution utility will no longer be an active competitor for least-cost electricity generation. Thus, the benefits of competition at the wholesale level will no longer be available. Although the retail utility will certainly be expected to seek out the least-cost source of power each time it seeks bids on its next long-term contract, there is no reason to expect the less expensive power predicted by FERC and other wholesale generation proponents to be available at that time.

Second, the capacity costs inherent in the ownership of power plants by a vertically integrated industry will likely come up again in the context of different levels of contracts. Just as in natural gas contracting, the retail distribution utility will likely have base load, shoulder, and peak contract capacity. Accordingly, potential price impacts arising from elimination of the capacity/energy distinction probably will not exist.

Finally, it is possible, perhaps even likely, that an electric industry marked by competition at the wholesale level will still present few opportunities for small-business, residential and low-income customers to realize significant price savings at the distribution level. Even an electric industry facing wholesale competition will have both the incentive and the opportunity at the distribution level to engage in the same cost-shifting techniques that currently exist. Competition at the wholesale level does not reduce the political and economic power of large industrial customers.

Given the likely scenario of an electric industry that is vertically integrated through long-term contracts (even if ownership interests have been divested), an electric industry marked by competition at the generation level will at the distribution level still face the incentives and opportunities to make decisions adversely affecting affordability to small-business, residential and low-income customers that are faced today. One issue that can be expected to arise is an allocation issue regarding the costs of the different types of contracts with questions about who "caused" the utility to enter into one type of contract or another. The same political forces will be at play to minimize rates to large industrial customers through explicit or implicit cost allocation methodologies. Another issue will be allocation of the costs of mistakes involving excess contract capacity.

In sum, assuming the rise of long-term contracts as a means for the retail electric industry to meet its obligation of providing reasonably adequate service at all times, an electric industry that is competitive

at the wholesale level will involve the same incentives and opportunities as exist today for the retail electric industry to make decisions adversely affecting the interests of small-business, residential and low-income customers. Regardless of wholesale price activity, the electric distribution utilities serving these customers will be under the same pressures to reduce industrial rates, will face the same decisions that they face today to do so, and will have the same opportunities to do so.

Gaming the System

An electric industry that is competitive at the wholesale level will involve the same incentives and opportunities for large industrial customers to game the system in search of lower electric rates from retail distribution utilities. Rather than arguing that it is better to have some contribution toward fixed generation costs, however, proponents will argue that it is better to have some contribution toward fixed contract costs.

Given the eventuality that a competitive wholesale industry will evolve into a retail wheeling model, policymakers must be aware of the possibilities of large users gaming the system. (Gaming the system was discussed in detail earlier.)

Exercise of Large-User Economic and Political Power

A competitive wholesale electric industry can be expected to eventually metamorphosis into a direct-access industry. It is doubtful, therefore, that a wholesale competitive electric market would be a stable institution. The push for direct-access retail wheeling, after all, is a political phenomenon as well as an economic one. Large users that have the political and market power to obtain a better deal through reduced prices will push for those reduced prices. If prices below the rates of the local distribution utility are available at the competitive wholesale level, therefore, large users will apply renewed pressure for direct access to those prices. And given the political and economic power of the customers that will seek direct access, it can be expected that the industry will move in that direction.

Environmental Protections

Wholesale competition can be expected to present the greatest environmental problems to small-business, residential and low-income customers.⁶³ Most of the electric industry infrastructure disproportionately harms low-income and minority households and the most environmentally damaging infrastructure is at the generation and transmission level. Competitive markets will exacerbate these environmental problems. An electric industry that is competitive at the generation level, in other words, will have financial incentives to impose the greatest environmental harms on low-income and minority households. For example, utilities making facility-siting decisions will have an economic incentive to take the least-cost property. Since property values for small businesses and low-income households are likely to be lower than those for large businesses, an industry seeking to minimize costs to be competitive will want to take these properties.

In addition, when facility-siting decisions are made, delays can be expected to result in cost increases. Accordingly, the industry will have an incentive to minimize such delays by dealing with the least

powerful groups. The political power of small-business and low-income customers is likely to be less than the power of large companies. This is an empirically demonstrable fact. Substantial research shows that political involvement, efficacy and a sense of "public self" decrease dramatically for those of low socioeconomic status. Low-status groups are the least likely to get involved politically; the least likely to speak out, even on their own behalf; and the least likely to be involved in the regulatory process for utilities.⁶⁴

Finally, a competitive wholesale power industry will create the opportunity for owners of existing generation facilities in urban areas to resurrect fully depreciated generating units that had been shut down. These units can be operated to produce off-system sales based strictly on variable costs. Given the availability of air-pollution-control offsets to the utility industry, the local environmental damage of these old, inefficient and dirty fossil-fuel units will not be mitigated. As a result, the businesses and the low-income and minority households in proximity to these units will suffer disproportionate harm.

Public Input into Decision Making

Finally, an electric industry that is competitive at the wholesale level will create substantial opportunities for a decrease in public input into decision making. The ability of small-business and residential customers to participate in decision making tends to be localized. Hence, as a competitive electric industry seeks the "more efficient" federalization of decision making, these customers will be excluded.⁶⁵ Federalized decisions might include those dealing with generating plants and transmission lines, for example.

This increasingly federalized decision making will arise as wholesale competition becomes broader in scope, reaching regional and national proportions. Given wider markets than in the past, when electricity tended to be provided by the distribution utility's own plants and when transactions involving purchased power tended to be regional at most, each individual purchase decision involving power generation will have regional and national implications. State regulation would be ill-suited to the interstate consequences of particular industry actions.

In addition, wholesale transactions are, by law, regulated at the federal level. Although state commissions will still govern transactions between the distribution utility and the end user, the transactions that underlie the expenses incurred by that distribution utility in procuring energy will be regulated, if at all, by FERC.

In many ways, though, the wholesale competition model provides the greatest potential to retain the ability of small-business, residential and low-income consumers to have input into decision making. This model keeps intact the local retail monopoly franchise. Decisions as to the relationship between the local utility and its end users will therefore continue to be at a state regulatory or legislative level, with no diminution of the potential for participation.

Moreover, under wholesale competition model, as long as the local monopoly franchise remains intact, there is no reason that integrated resource planning (IRP)-including public participation-is likely to continue to be used to compare supply and demand reduction options and to design resource portfolios

that hedge against long-term risks and balance spot-market purchases with long-term contracts.

Public-Policy Decisions and Initiatives

In light of the analysis just set forth, legislators and regulators should develop a specific program to mitigate the most serious adverse consequences associated with an electric industry structure marked by wholesale competition. This program would involve at least two components: affordable rates and public input into decision making that involves environmental protection.

Affordable Rates. Given the importance of wholesale power contract decisions under an electric industry structure marked by wholesale competition, the process of power procurement becomes even more important from the perspective of affordable rates to small-business, residential and low-income customers. Accordingly, policymakers should strengthen state integrated resource planning processes, allowing inquiries that would compare supply and demand reduction options as well as inquiries into local utility decisions about the design of resource portfolios that hedge against long-term risks and balance spot-market purchases with long-term contracts. They should also strengthen state review of electricity procurement decisions. Several states, including Iowa, Illinois and Michigan, have specific regulatory processes that permit state review of the fuel and power procurement practices of local utilities. These procurement reviews should be emulated by others.

Public Input into Decision Making Involving Environmental Protection. Given the increased reliance on federal decision making, particularly on environmental issues as discussed above, and the inherent difficulty for small-business, residential and low-income customers to be represented in such decision making, a system of funding for intervenor assistance should be established at the federal level. The system should provide intervenor assistance in any administrative or judicial process that affects the wholesale provision of power, whether it is before FERC, the Environmental Protection Agency (EPA), the Nuclear Regulatory Commission (NRC) or some other federal agency.

Moreover, intervenor assistance should be provided systematically at the state and local level. Given the market pressures that will work to the detriment of small-business, residential, and low-income customers generally, and minority customers in particular, the primary means of protection should be participation at the regulatory level. To place people at risk, without providing them an opportunity for protection, would be unreasonable.

Summary and Conclusions

Small-business, residential and low-income customers have many legitimate concerns about a competitive electric industry, including the following:

- That the electric industry will pay little attention to rate affordability, given the pressures created by larger and more powerful industrial customers;
- That the electric industry will back away from programs based on noneconomic considerations, such as procedural and substantive payment protections;

- That small users will be entirely excluded from decision making processes that affect their economic, environmental and social well-being; and
- That the electric industry will view itself as just another business, rather than as a business affected with the public interest, which requires a commitment to universal service and an obligation to serve.

Unfortunately, in these four areas of concern, each of the competitive models offers a much greater downside than an upside for small-business, residential and low-income customers. The issue seems not to be which of the various competitive models is best for such customers, but which is least bad.

Specific public policies and initiatives can help mitigate the worst of the adverse impacts while promoting the best of the positive ones. Under all three models studied, as the electric industry becomes more competitive, the scope of regulation will decrease, as will the ability of public policymakers to set policy. It is therefore important for policymakers to implement helpful policies at the time of restructuring rather than seeking to do so afterwards. Without the presence of such policies, the industry may drift into making irreversible negative commitments and causing irreversible harms.

A summary of the public-policy decisions and initiatives recommended in response to the three competitive models is included as appendix C.

Appendices

Appendix A

Small Customers and Capacity Cost Allocations

To understand the conclusion that competition might lead to significant cost-based price reductions to small-business, residential and low-income customers, it is necessary to consider why such customers often bear a significant portion of a regulated utility's allocated cost of service. Under current cost-of-service regulation, the embedded costs of a utility are assigned to different customer classes on the basis of an evaluation of "causation." One universal principle in utility ratemaking is that, within a universal service constraint, the customer class that causes a utility to incur a cost should be the customer class that bears the cost.⁶⁶

Of course, few costs in the utility industry are directly assignable. More often, a utility incurs joint costs in providing power to all customer classes. Those costs must be allocated to the various classes through some type of formula. For example, fuel costs might be allocated on the basis of the amount of energy consumed by each class. Billing and accounting costs might be allocated on the basis of the number of customers in each class. Traditionally, residential rates tend to be substantially higher than industrial rates on a per kilowatt-hour basis. One primary reason for this tendency is that residential customers are allocated a higher proportion of the capacity costs of the utility system. Capacity costs are the capital costs (including financing) associated with generating and transmission facilities used to meet the demand for power at any instant in time.

A utility generally must build sufficient capacity to meet the peak demand on its system. Peak demand is the highest demand experienced at any instant over the course of a year.⁶⁷ Depending on whether a utility has a greater electric-cooling or electric-heating load, the peak will generally be either on the hottest day of the summer or the coldest day of the winter.⁶⁸ From a cost allocation perspective, therefore, the issue is the extent to which customer class contributes to that peak demand. Generally accepted capacity cost allocators include variations on a theme involving the determination of class contributions to peak demand.⁶⁹

Because of space heating and cooling demands, residential customers almost universally tend to contribute most to a utility's peak demand. In contrast, industrial loads tend to be more constant throughout the year. Hence, industrial customers may tend to use more electricity, they are not likely, as a class, to make the most significant contribution to peak demand. As a result, residential customers tend to be assigned a substantial portion of a utility's total capacity costs.

This cost allocation is significant in that the utility industry tends to be a capital-intensive industry. With the bulk of capacity costs assigned to the residential class, residential rates are higher than those of other classes.

Appendix B

The Competitive-Protections Framework for Analyzing Impacts on Small-Business, Residential and Low-Income Customers

Now that the variety of harms and benefits that may arise from a competitive electric industry have been identified, the next step in this analysis is to evaluate under which competitive models the various harms and benefits are most likely to arise. The models that will be assessed are retail competition, wholesale competition, and a modified vertically integrated industry.

The assessment of harms and benefits to small-business, residential and low-income customers within each of the competitive models involves three steps: (1) identifying the competitive protections sought through a competitive electric industry, (2) determining whether firms that make up the industry have both the incentive and the opportunity to allow the harms or benefits to arise, and (3) assessing how the identified harms and benefits might be operationalized by a competitive electric company.

Competitive Protections as the Goal to Be Sought

Each model of competition in the electric industry must be assessed to determine whether it will provide competitive protections to small-business, residential and low-income customers. Competitive protections arise when three factors exist: (1) the number of firms providing service is sufficient; (2) the institutional arrangements that arise as a result of the market structure are adequate; and (3) the consumer characteristics are appropriate, so that small-business, residential and low-income customers are not subjected to abuse or imposition.⁷⁰ In other words, if adverse impacts are imposed by certain firms in the market, consumers must have both the choice of an alternative supplier so as to avoid those

impacts and the ability to exercise that choice.

The next step involves an assessment of incentives and opportunities for harms and benefits.

Incentives and Opportunities

Two important questions must be answered about each competitive model: Would the electric industry have the incentive to bring about the result (either the harm or the benefit)? Will the electric industry have the opportunity to bring about the result? The incentive to perform an action can exist without the opportunity to do so and vice versa. For the harms and benefits to arise, both incentive and opportunity must exist.

The incentive and opportunity framework is not unique to the electric industry. Indeed, concerns about the potential of cross-subsidies in the competitive telecommunications industry were often evaluated using this approach. There was substantial concern, for example, about cross-subsidies between basic and nonbasic services.⁷¹

The incentives and opportunity analysis must include both industry structure and consumer characteristics. Most analyses of whether workable competition exists concentrate only on the perspective of firms in the industry. They rely almost exclusively on the multiplicity of firms and the implications of such multiplicity in support of deregulation.⁷² A determination of whether competition exists, however, depends on an examination of consumer characteristics as well. Such characteristics might include availability of information and habit buying.⁷³

The Operationalization of Harms and Benefits

It is unlikely that any utility would decide to bring about harms to particular customer classes. For example, no utility would decide to impose unaffordable rates on small-business, residential and low-income customers. What would happen, instead, is that the utility would make a series of decisions that would have an impact on the affordability of rates. Through its decisions to do or to avoid doing certain things, the utility would manifest its competitive position on the importance of affordable rates to small business, residential and low-income customers.

Given this analytic framework, three questions help identify the activities through which a utility may manifest its competitive position on the harms and benefits just identified:

- What do utilities do today, that they will have the incentive and opportunity to stop doing?
- What should utilities do in the future, that they will have the incentive and opportunity to avoid or prevent doing? and
- What should utilities avoid doing in the future, that they will have the incentive and opportunity to do?

In sum, a broad evaluation of the impacts of electric competition on small-business, residential and low-

income customers involves a determination of whether the industry is capable of providing competitive safeguards to those classes. To make this determination, policymakers must examine whether the competitive industry has both the incentive and the opportunity to bring about the identified harms or benefits-not through generalized policies but through specific decisions and actions.

Appendix C

Summary of Policy Recommendations to Protect Small-Business, Residential and Low-Income Customers in a Competitive Electric Industry

Limited Retail Wheeling, Special Industrial Discounts and Performance-Based Ratemaking

Protecting Rate Affordability

- Adopt the principle of approving an explicit consideration of rate affordability in ratesetting along with requiring that electric utilities make their best effort to ensure affordable rates.
- Adopt the principle that affordable rates will be considered acceptable as long as the small-business, residential or low-income customers paying such rates pay their fixed cost of service and make some contribution to variable costs.
- Adopt a methodology to explicitly consider all benefits of affordable rates.

Gaming the System

- Create a discrete economic development budget that is delivered through an economic development rate.
- Create a process under which applicant industries wishing to take advantage of the economic development incentive would compete for a share of the economic development budget.
- Create an enforcement mechanism that establishes the utility's right to recoup the economic development incentive if promised performance standards are not met.

Energy Efficiency

- Create and promote new, innovative partnerships through which to deliver energy efficiency.
- Require that one component of the new partnerships include elements that allow providers to use utility company dollars without requiring the expenditure of such dollars. These elements might include, for example, loan guarantee programs and linked deposit programs.
- Require that utilities target their energy-efficiency programs to customers that can help lower utility expenses.
- Require the development of a methodology to consider all beneficial aspects of energy efficiency, including nonresource acquisition benefits such as reduced working capital, reduced credit and collection costs, stabilized neighborhoods, and increased home ownership.

Performance-Based Ratemaking

- Implement all policy options decision makers wish to put into place before permitting a move to performance-based ratemaking.
- Create performance criteria based on rate affordability, specifically including measures of minimizing utility service disconnections, minimizing unsuccessful deferred-payment agreements, and minimizing the number of households that are in arrears (excluding bills subject to deferred-payment plans from the definition of arrears).
- Create a performance criterion to measure the achievement of universal service, specifically including a measure of the extent to which at-risk customers maximize their contribution to fixed costs after covering their variable costs of service.
- Adopt sunset clauses for performance-based rates.
- Limit CPI-based escalations in prices to the proportion of total costs represented by operating expenses. Even if the CPI is appropriate as a measure for operating expenses, it is highly inappropriate for capital costs, which do not vary year-to-year with inflation.

Industrial Discounts

- Include specific, enforceable conditions on any industrial discounts granted. The number of family-wage, benefited jobs created, the jobs per dollar of expenditure, and the like should be taken into explicit consideration in a review of industrial discounts.
- Prohibit utilities from subsidizing inefficiencies through industrial discounts. To the extent that an industry applies for a discount has cost-effective energy efficiency that is available but unimplemented, for example, there is inefficiency in that applicant's operations.
- Prohibit utilities from interfering with the market enforcement of efficiency in business operations. Suppose competitor A has squeezed all possible cost-effective energy savings out of its operation but competitor B has not. In this situation, competitor A will have a competitive advantage in prices offered to consumers. That is as it should be. If, however, the utility steps in to provide competitor B with an economic development rate, that subsidy will deny competitor A the competitive advantage the free market would have provided because of competitor A's efficient operations.
- Require a utility seeking to deliver economic development incentives to demonstrate that those incentives are being delivered to the areas most in need of economic development. Criteria for eligibility might include minimum standards for determining the level of economic distress of cities and urban counties where businesses are eligible for such discounts."
- Declare that the redistribution of economic activity should not be considered a "benefit" of an industrial discount. Thus, for example, state public policy can provide that no assistance will be given for projects intended to facilitate the relocation of industrial or commercial plants or facilities from one area to another, unless state regulators find that the relocation does not significantly and adversely affect the employment or economic base of the area from which the plant or facility is to be relocated.

Retail Competition

General Statement

- Implement all policies appropriate to limited retail wheeling and special industrial discounts for retail competition as well.

Promoting Comprehensive Retail Competition

- Develop a mechanism to permit small-business, residential and low-income customers to directly participate in the competitive purchase of electricity.
- Approve incentives for the creation of public and private small-user aggregators.
- Serve small users early, not late, in the roll-out of competition. Reject proposals to initiate electric industry competition for large users, with small users to be brought in "eventually."
- Approve financial incentives to provide quality service to small users, including specific public financial incentives to pursue small-user marketing.

Affordable Rates

- Require utilities to rigorously evaluate the economic benefits of providing affordable rates.
- Adopt the rule that so long as affordable rates cover the variable costs of providing service to the affected customer class and make some contribution to the fixed costs, the rates will be acceptable.
- State explicitly that the electric industry is an industry affected with the public interest and that it therefore has an obligation to make its best efforts to ensure affordable rates.
- Promote a variety of consumer choices in the services to which small-business, residential and low-income customers can subscribe, including not only a choice of suppliers but a choice of lower-cost services as well.
- Prohibit geographic diverging of rates.
- Prohibit the unbundling of service charges unless it is supported by some demonstrable social policy.
- Strictly regulate customer class definitions to prevent unfair discrimination (either explicit or de facto) as well as deceptive acts and practices.

Redlining

- Adopt an effects test to prevent business practices that have a discriminatory impact on a class of people even if the utility's intent appears to be neutral.
- Adopt disclosure requirements for competitive retail electric utilities in order to prevent the redlining of communities with high concentrations of racial-minority and low-income customers. Such requirements can be closely modeled on the federal Home Mortgage Disclosure Act.

Alternative Service Providers

- To the extent that alternative service providers develop a customer base among small-business, residential and low-income customers, their service should be provided through a system of billing and collection service (BCS) contracts similar to those in the telecommunications industry.
- Provide customer service protections through regulation of the BCS contract, not through direct regulation of the alternative service provider.

Wholesale Competition

Affordable Rates

- Strengthen state integrated resource planning processes, allowing inquiries that would compare supply and demand reduction options as well as inquiries into local utility decisions regarding the design of resource portfolios that hedge against long-term risks and balance spot-market purchases with long-term contracts.
- Strengthen state review of electricity procurement decisions. Several states, including Iowa, Illinois and Michigan, have specific regulatory processes that permit state review of the fuel and power procurement practices of local utilities. These procurement reviews should be emulated by others.

Public Input into Decision Making Involving Environmental Protection

- Establish a system of funding for intervenor assistance at the federal level, particularly on environmental issues. The system should provide intervenor assistance in any administrative or judicial process that affects the wholesale provision of power, whether it is before FERC, the EPA, the NRC, or some other federal agency.
- Systematically provide intervenor assistance at the state and local level.

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[Bibliography](#)

[GLOSSARY of Electric Utility Restructuring Terms](#)
