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## Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform

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### Contributors to this Report

Bureau of Economics, Bureau of Consumer Protection, Bureau of Competition, and Policy Planning, Federal Trade Commission

This Report represents the views of the staff of the Federal Trade Commission. It does not necessarily represent the views of the Federal Trade Commission or any individual Commissioner.

Inquiries regarding this report should be directed to:

Michael S. Wroblewski, (202) 326-2155 (Policy Planning),  
John C. Hilke, (303) 844-3565 (Bureau of Economics),  
Mary K. Engle, (202) 326-3161 (Bureau of Consumer Protection), or David A. Balto, (202) 326-2881 (Bureau of Competition).

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## EXECUTIVE SUMMARY

Electric power is the latest -- and largest -- industry in which advances in technology have made extensive regulation obsolete. In particular, it is now possible for customers (*e.g.*, residential consumers and businesses) to select their own electric power supplier, while the transmission and distribution functions of electric power continue to be regulated.

Restructuring the electric power industry raises many competition and consumer protection issues concerning how to obtain lower prices, cost efficiencies, and innovations of a competitive market without creating new inefficiencies or penalizing incumbent utilities. Indeed, the benefits of deregulating the electric power industry may be deferred -- or may not materialize at all -- if existing monopoly utilities are left unchecked to exercise market power in a deregulated marketplace.

The Federal Trade Commission has articulated four principles for effective restructuring of electric power markets to ensure that the benefits of competition flow to consumers. Briefly, these principles include: (1) unburdening markets from substantial and durable horizontal market power; (2) removing incentives for vertically integrated firms to engage in undue discrimination and cross-subsidization; (3) fostering accurate, non-deceptive information disclosure to customers about price and service offerings; and (4) promoting uniform disclosure of the prices and other relevant attributes of offers to customers.<sup>(1)</sup> This Commission staff report, which stems from the Commission's unique role of studying competition and working with the business community to detect new market trends, suggests an analytical framework that federal and state policymakers may wish to employ to ensure that consumers and businesses benefit from electric power industry restructuring.

After describing briefly the technical advances in the electric power industry that have made restructuring possible (Chapter I), the report discusses how high concentrations in the ownership of existing generation assets (which remain from an era of regulated monopolies) may allow the exercise of market power, to the detriment of consumer welfare (Chapter II). The electric power industry's history of common control of generation assets and transmission lines may impede wholesale competition, largely because of a utility's ability to discriminate against competing generation sources in providing access to its wholesale transmission assets (Chapter III). A lack of wholesale competition is likely to harm retail competition as well. A utility's incentives and ability to discriminate and to cross-subsidize unregulated activities also arise in transactions between the regulated parent utility and its unregulated business units offering generation or other services at the retail level (Chapter IV). Moreover, the use of behavioral rules to control these incentives may be ineffective; remedies separating ownership of different assets may be more effective and less costly to enforce.

As the electric power industry is deregulated, the number of mergers is expected to increase as firms respond differently to new competitive opportunities. The staff report analyzes issues involved in, and presents an analytical approach to, horizontal and vertical/convergence mergers in the electric industry. This analysis may be useful to state regulators as they evaluate mergers in the energy industry, including mergers that involve other sectors of the industry (Chapters V and VI).

Whether and how consumers participate in competitive retail electric power markets will determine whether electric power industry restructuring is successful. The provision and pricing of "default service" (for consumers who fail to choose a new supplier) are likely to be critical determinants of whether consumers will participate in these markets (Chapter VII). Consumers in electric power markets are likely to be better able to promote their interests when a substantial portion of them can readily switch among several suppliers offering a variety of products and services and when they can easily compare prices and terms of competing offers. Consumers' ability to choose among newly offered options is likely to be enhanced if non-deceptive advertising claims are supplemented by uniform disclosures of terms of service, prices, and relevant attributes of electric power. In addition, vigilant enforcement against unfair or deceptive business practices, which may crop up in a newly deregulated electric power market, is critical to ensure that consumers obtain the benefits of competition (Chapter VIII).

## FOREWORD(2)

Electric power is the latest and largest industry in which extensive regulation has been outmoded by technology. In particular, scale economies in generation have diminished, enabling entry of efficient small-scale generation sources so that electric utilities can meet demand through, and trade excess electric power in, more competitive wholesale markets. The Federal Energy Regulatory Commission (FERC) has initiated competition at the wholesale level, and nearly one-half of the States are implementing retail competition that allows customers to choose their electric power supplier, while the transmission and distribution functions of electric power continue to be regulated.

The stakes are high in the shift to a competitive environment for the electric power industry. Total industry revenues are estimated at \$200 billion a year. Regulation has receded in industries such as airlines, telecommunications, railroads, trucking, banking and financial services, and the production and transmission of natural gas (which shares many of the same structural characteristics as the electric power industry). Extensive research on the actual effects of regulatory reform has revealed a pattern of substantial benefits, including cost savings, technological advancements, and increased variety of products and services.(3)

If the levels of cost savings and technological improvements in this industry approach those attained in previously deregulated industries, consumers will be substantially better off in terms of lower prices and increased choices.(4) The gains typically take several years to be realized and may be thwarted if incumbent monopolists are permitted to exercise market power to the detriment of a competitive market. Ensuring the benefits of competition will require vigorous antitrust and consumer protection law enforcement. If private market power is unleashed or accumulated following the withdrawal of regulatory constraints, consumers will likely lose potential benefits of regulatory reform and restructuring.

The starting point for thinking about regulatory reform of the electric power industry is not the level playing field characteristic of a newly developing market. Instead, vertically integrated, regulated monopolies have controlled the generation, transmission, and distribution of electric power in state-authorized geographic territories. In this context, as regulation is reduced and competition is encouraged, there is a significant potential that these utilities will use their existing market power in generation, transmission and distribution services to deter competition that could benefit consumers. In addition, consumers have not previously had choices of electric power suppliers, and thus consumer protection issues need particular attention.

The Commission has developed four principles that apply to the analysis of competition and consumer protection policies in a deregulated electric power industry. We have used these principles when asked to evaluate state and FERC proposals. The principles also have guided us when we have been requested to review federal restructuring legislation.

**Principle 1: Assessing Horizontal Market Power:** Traditional antitrust analysis recognizes that the benefits of competition are most likely to accrue to consumers when markets operate unburdened by substantial and durable market power. Outside the merger context, concerns with horizontal market power focus on the possibility that one or a few generating firms might obtain and be able to exploit market dominance in areas of the country where transmission congestion occasionally creates restricted geographic markets for electric energy (load pockets).

Current antitrust laws are not designed to address the mere possession of market power or the legitimate acquisition of or increase in market power through lawful regulatory processes. Instead, the antitrust laws are designed to address increases in market power brought about by mergers or unfair methods of competition, such as predation, discrimination, and raising rivals' costs. In light of this possible situation, tools to identify and remedy horizontal market power in generation are critical to increased competition in electric power markets.

**Principle 2: Independence of the Transmission Grid:** Market power at the transmission level is likely to give a vertically integrated firm the incentive to discriminate against its competitors. Vertically integrated utilities, even after functionally unbundling their generation assets from their transmission assets, have a continuing opportunity to engage in undue discrimination in providing access to their transmission facilities and thus to impede competitive markets. Vertically integrated firms also may exercise their market power through cross-subsidization in favor of their unregulated affiliates.

Both forms of behavior will likely reduce the degree of competition facing the integrated firm's generation assets. These two forms of anticompetitive behavior, plus the costs of regulation, may be significant enough in some circumstances that separating the operation (and/or ownership) of the transmission grid from the ownership of affiliated power marketing interests should be the preferred solution to address horizontal market power at the transmission level.

**Principle 3: Non-Deceptive Advertising:** The benefits to consumers of a competitive electricity market will be substantially reduced unless the information presented to consumers through advertising and other means is accurate and non-deceptive. In determining whether an advertising representation is deceptive, the Commission relies on the principle that if at least a substantial minority of consumers takes a particular message from an advertisement, and if that message is likely to mislead consumers to their detriment, then the advertisement is deceptive. Moreover, consumer confidence in any competitive market is based on informed choices. The information provided to consumers also must be substantiated using a reasonable basis, and the substantiation must be verifiable by third parties, including the government. As a practical matter, consumers cannot verify for themselves the attributes of the electric power they purchase (e.g., they cannot verify that the electricity they are purchasing is generated through wind power).

**Principle 4: Uniform Disclosures:** Uniform disclosure of terms, prices and relevant attributes of electric power also will help ensure that consumers are able to make well-informed choices and thereby reap the benefits of competition. Consumers have had no prior experience in choosing an electric service provider. A uniform disclosure containing

standardized information that electric service providers would use to inform consumers in their advertising -- similar to what has been done with nutrition labeling on food or energy efficiency labels on appliances -- will help ensure that consumers are not misled or confused. It also would facilitate national marketing of electric power.

## ORGANIZATION OF THE REPORT

This report summarizes various competition and consumer protection principles that are involved with regulatory reform and restructuring of the electric power industry. Discussions of these principles are excerpted from FTC staff comments to state regulatory commissions and to FERC. The staff comments are supplemented and updated with insights gained from the FTC's Public Workshop: Market Power and Consumer Protection Issues Involved with Encouraging Competition in the U.S. Electric Industry (Sept. 13-14, 1999) (Electricity Public Workshop). The intent is to provide policy makers and industry with analytical tools and supporting information on a wide range of competition and consumer protection issues to advance the emergence of effective competition in the electric power industry for the benefit of consumers.

The report is organized in the following manner:

- Chapter I reviews briefly the technical advances in the electric power industry and the regulatory reforms in other industries or in the electric power industry abroad that precipitated consideration of competition in generation of electric power in the U.S.
- Chapter II discusses existing horizontal market power issues in electric power generation. This issue has gained importance as dominant generating firms (or concentrated ownership of generation assets) remain in some areas despite open access to wholesale transmission services. High concentrations of generation ownership may allow the exercise of market power even after competition is introduced in wholesale and retail markets.
- Chapter III discusses how common control of power generation and transmission services holds risks for wholesale competition. Nondiscriminatory access to a utility's transmission facilities facilitates competition among wholesale electric power suppliers because transmission facilities are likely to remain regulated monopolies. Incumbent, vertically integrated firms have an incentive to exercise their market power at the transmission level by (1) discriminating against competing electric power suppliers in providing transmission facility access, and (2) engaging in cross-subsidization in favor of their unregulated power marketing affiliates.
- Chapter IV reviews various forms of vertical discrimination and cross-subsidization that can occur in transactions between regulated utilities and their unregulated affiliates at the retail level. As states implement retail competition (*i.e.*, allowing customers to choose their electric power supplier), cost shifting and discrimination concerns have arisen concerning activities of a regulated utility that maintains a monopoly over local distribution lines and its unregulated affiliates engaging in competitive lines of business. The FTC staff has been skeptical of the effectiveness of an ongoing behavioral or regulatory approach to resolving these issues.
- Chapters V and VI analyze issues involved in, and present an analytical approach to, horizontal mergers and vertical/convergence mergers, respectively. With regulatory reform in both wholesale and retail electric markets, incentives to restructure the industry have arisen that may include mergers that threaten to create or perpetuate market power and, thereby, frustrate competition.
- Chapter VII analyzes particular issues that may affect entry into retail electric power markets, including the pricing of default service. In particular, the chapter discusses how to avoid forms of stranded cost recovery in retail electricity rates that will subsidize or penalize either incumbents or entrants and, thus, discourage entry.

- Chapter VIII identifies and discusses consumer protection issues that have arisen as retail competition is initiated in several states. The benefits of a competitive electricity market will be substantially reduced unless the information presented to consumers through advertising and other means is accurate and non-deceptive.

## FTC INVOLVEMENT

The FTC's involvement with electric power industry regulatory reform, like its involvement in earlier regulatory reform efforts in several industries, stems from its missions to promote competition and consumer protection through law enforcement and advocacy activities.

**1. Antitrust Enforcement** The FTC has had substantial involvement in the electric power industry through the PacifiCorp/Peabody convergence merger<sup>(5)</sup> and in evaluating the competitive aspects of mergers between natural gas and electric power utilities.<sup>(6)</sup> The United States Department of Justice (DOJ) has taken the lead on most mergers that solely involve electric utilities.<sup>(7)</sup> In addition to merger matters, the Commission has responsibility to prevent unfair methods of competition, which may be especially acute as the electric power industry moves toward competition.

**2. Consumer Protection** With the sharp rise in interest in retail competition in the electric power industry, consumer protection issues have risen to prominence on state and federal agendas. The Commission's law enforcement powers in advertising and over unfair business practices are applicable to a restructured and less regulated electric power industry. In addition, several pending legislative bills would provide federal agencies with the authority to require disclosure of prices and environmental characteristics to consumers; certain proposed legislation designates the FTC as the enforcement agency for these disclosure requirements.

**3. Competition Advocacy** Staff of the FTC has provided comments to FERC and to various states on competition and consumer protection issues raised as the electric power industry experiences restructuring and regulatory reform.<sup>(8)</sup> In addition, the Commission has analyzed pending federal restructuring legislation and provided testimony to relevant Congressional committees.

**4. Electricity Public Workshop** The FTC conducted a workshop on market power and consumer protection considerations in the electric power industry to further assist states in examining these important issues. Workshop presenters emphasized many of the same issues addressed in FTC staff comments and highlighted two areas where policy discussions have focused most recently. These policy areas include state policies that may enhance or thwart (1) a vertically integrated utility's advantages with respect to default service obligations, consumer shopping credits, and its affiliate's use of the utility's name or logo, and (2) consumer awareness of and information about retail competition.

## I. INTRODUCTION

*The evolution of the technology of the electric power industry has motivated reconsideration of the organization and regulation of the industry. In particular, scale economies in generation have diminished, leading to interest in opening generation and sales of electricity to competition. Although regulatory reform of the electric power industry started abroad, interest in reform has spread across much of the U.S. as regulators and customers focus on the prospects for lower rates and more options in electric service through increased competition.*

### A. Underlying Technological Changes

The electric power industry consists of three stages of production: generation, transmission, and distribution.<sup>(9)</sup> Generation, at its most basic, entails rotating coils of copper wire through a magnetic field. Electricity suppliers typically utilize heat from combustion of coal, oil, or natural gas (or from a nuclear reactor) to create steam. Pressurized steam forces the blades attached to the turbine shaft to rotate. The rotation of the turbine shaft drives the

generator to produce electric power. Alternatively, the turbine blades may be rotated directly by falling water or by wind. Transmission from the generator to local distribution is carried over high voltage transmission lines stretched between the familiar large towers that dot the countryside. The distribution stage occurs once the high-voltage electricity arrives close to the load centers. It begins when transformers step down the voltage to useable levels. The electricity then flows through the local, low-voltage distribution system to individual customers.

There are four aspects of electricity and its supply technology that give rise to unique characteristics of the electric power industry and, therefore, deserve special attention. First, electricity cannot be economically stored in large quantities. Consequently, demand and supply must be balanced continuously and instantaneously to maintain service reliability.<sup>(10)</sup> Second, generating costs, for an area's electric system as a whole, are generally minimized during low demand periods by operating a few generating plants near capacity while leaving others idle. Generating plants with a wide variety of marginal costs may coexist in serving customers in a given area. As a result, generating costs for an area's electrical system can vary a great deal across different times of the day and seasons of the year. Third, electricity follows the path of least resistance and does not generally follow the shortest route between two points, much less the assumed contract path<sup>(11)</sup> for the transmission. Hence, it can be difficult to accurately compensate transmission owners for transmission services and congestion effects (loop flows<sup>(12)</sup>) using conventional transmission rates. Fourth, all generators within an interconnected transmission network must be synchronized with respect to the alternating current cycle they produce. Generators not in synchrony will disrupt reliability and reduce net generation available to the system. Only relatively limited ties (or interconnected lines) are available between areas that are not synchronized.<sup>(13)</sup>

Two other important technological aspects of the industry have been economies of scale and economies of vertical integration. Until the 1980s, both scale economies and economies of vertical integration were seen as endemic to the entire industry. They were viewed as a sufficient justification for treating the whole industry as a natural monopoly.<sup>(14)</sup> Recent technological advances, however, have undermined this consensus, particularly with respect to generation. The most important of these developments has been the combined-cycle gas turbine. This technology can be competitive with coal and traditional natural gas generating plants, but at a much smaller scale. Efficient-scale, combined-cycle gas plants may be less than one quarter the size of efficient-scale coal or nuclear plants. Indeed, micro-generators, reflecting additional declines in minimum efficient scale generators, are now entering the marketplace and may open the option of onsite generation to a far broader proportion of customers than prior technologies allowed. Deregulation of natural gas and the resulting decline in natural gas prices relative to other fuels underlined the importance of this new technology. At the same time, new institutional arrangements, particularly regional transmission organizations (RTOs), are expected to be able to capture many of the benefits of vertical integration without many of the costs.<sup>(15)</sup>

## **B. Underlying Regulatory Changes**

Until very recently, the electric power industry in the U.S. was treated as a series of local, vertically integrated natural monopolies subject to rate of return and quality of service regulation. States controlled retail rates while FERC controlled interstate transmission rates. Private utility firms accounted for about three quarters of industry capacity with the rest coming from various government-owned suppliers or cooperatives.<sup>(16)</sup> From the beginning of the century through the 1970s, the electric industry provided power at ever lower real prices by exploiting increasing economies of scale in both generation and transmission, and by incorporating other technological advances.

Several policy shocks hit the industry during the 1970s and 1980s. These shocks both motivated and facilitated the restructuring of the industry that is now taking place. The litany of disruptions is as familiar as "yesterday's" headlines: the OPEC energy crisis, nuclear safety, acid rain, blackouts and brownouts, and deregulation of natural gas prices.

Despite the shocks, new technologies, and disparities in prices between states, the U.S. regulatory system remained largely unchanged until the 1990s. In many ways, the U.S. electric power industry followed the restructuring developments in the United Kingdom.<sup>(17)</sup> In 1989-1990, the United Kingdom moved from a nationalized, vertically



integrated monopoly to a privatized and vertically unbundled industry committed to gradually opening up competition even at the retail level for both businesses and consumers.

The new U.K. system featured 1) several independent local distribution firms that would serve businesses and consumers, 2) a regional transmission organization (a Gridco<sup>(18)</sup> in this instance) to control the transmission grid and manage the dispatch of generation capacity to meet demand, and 3) independent generating firms. A tiered schedule was established for offering retail customers an opportunity to "shop" for their own electricity generator or power merchant (retail wheeling).<sup>(19)</sup> The results for the U.K. of this revolutionary change were generally positive. Prices fell for both large and small customers as efficiencies were realized in generation, transmission, and distribution. Reliability was maintained. New generating investments were attracted. Soon, talk of the successes of the U.K. model spread to the U.S.<sup>(20)</sup>

The main economic drawback in the U.K.'s new system proved to be a market power problem in generation. Initially, generation assets remained highly concentrated. This resulted in the exercise of market power at the generation level. Subsequently, the problem was addressed by requiring that the leading generating firms divest some of their facilities, and by new entry.<sup>(21)</sup>

The first major move toward regulatory reform and restructuring of the U.S. electric power industry was passage of the 1992 Energy Policy Act. It gave FERC authority to order open access to transmission lines and to encourage independent operation of the transmission grid. Shortly thereafter, California became the first state to contemplate retail wheeling. To date, states representing over 50% of the U.S. population have established target dates for initiating retail competition. Most recently, Congress and the Clinton administration have developed legislative proposals on electric power industry regulatory reform and restructuring.

## II. EXISTING MARKET POWER IN GENERATION SERVICES

*Concentrations of electric power generation may be high in some areas, in part because state and federal regulators assumed that rate and service regulation would remain in place indefinitely and thus may have assumed that there was no need for antitrust scrutiny to restrain prior growth of horizontal market power. As a result, one or a few generating firms might have obtained, and now be able to exploit, market dominance in areas of the country where transmission congestion creates restricted geographic markets for electric energy (load pockets). As regulations are relaxed to allow for retail trades of electricity, however, existing market power in generation may prevent consumers from realizing the full benefits of competition.*

*Current antitrust laws are not designed to address the mere possession of market power or the legitimate acquisition of or increase in market power through lawful regulatory processes. Instead, the antitrust laws are designed to address increases in market power brought about by mergers or unfair methods of competition, such as predation, discrimination, and raising rivals' costs.*

*Although individual states may be able to address these issues, the success of these efforts may be limited by the difficulty of identifying market power problems, distinguishing between predatory and vigorous competitive conduct, and tracing the effects of that conduct. This is especially true in markets where market power, conduct, and effects all tend to be interstate (regional) in nature. In addition, a state acting alone may not be able to implement the most effective remedies, which are likely to be regional.<sup>(22)</sup>*

*The DOJ/FTC Horizontal Merger Guidelines contain analytical principles that are appropriate to analyze existing market power. To the extent that market power already exists, state regulators and FERC have a variety of remedies from which to choose: implementation of regional transmission organizations (RTOs), easing of entry conditions for generation and transmission, facilitating new generation technologies, and divestiture to multiple parties of the generation assets of vertically integrated monopolies. Finally, the technological complexities of transmission flows and the non-storability of electricity make analysis of electricity market power potentially very difficult. Computer simulation modeling is a potentially attractive approach.*

Sections A through C are excerpted from the January 1999 FTC Staff Comment to the Alabama Public Service Commission. These sections discuss how market power can be exercised and suggest using the framework in the DOJ/FTC Horizontal Merger Guidelines to assess existing market power. Section D, excerpted from the May 1998 FTC Staff Comment on the Maine Attorney General's "Interim Report on Market Power in Electricity," discusses the importance of unimpeded entry into electric power markets. Section E, which also is excerpted from the 1999 FTC Staff Comment to the Alabama Public Service Commission, discusses the potential for computer modeling in assessing existing market power.

## **A. Both Horizontal Market Power and Discriminatory Access to Transmission May Be of Concern in the Electric Power Industry**

Market power is typically defined as the ability of a firm (or a coordinated group of firms) to profitably price above the competitive level for an extended period of time. There are two expressions of market power . . . : horizontal market power and discriminatory access to transmission. Horizontal market power in this context refers to the ability of one or more electric generating firms to raise prices above competitive levels for an extended period of time. Horizontal market power results in higher prices, inefficient allocations of scarce resources, and distortions of consumer choices. Concerns about horizontal market power in generation during deregulation have been heightened by the pioneering British deregulatory experience. Following the implementation of electric power industry restructuring in the United Kingdom, in 1989 and 1990, researchers determined that the two private generating firms that dominated the industry were exercising market power. These findings prompted subsequent orders for divestiture of generation capacity. In addition to horizontal market power, [state regulators] may want to examine closely the incentives and ability of a vertically integrated transmission monopolist, whose rate of return is regulated, to evade the regulatory constraint in order to earn a higher profit. Its participation in an unregulated market may give it the means to do so, either by discriminating against its competitors in the unregulated market or by shifting costs between the regulated and unregulated markets.(23)

Consistent with economic theory regarding potential competition concerns of this nature, numerous independent producers and large industrial users have alleged discriminatory conduct in the operation of transmission facilities.(24) Likewise, this behavior is consistent with the evidence from the Supreme Court's Otter Tail Power decision.(25)

## **B. If [the State Commission] Determines That It Faces Likely Market Power Problems in Generation, Addressing Them through Structural Remedies May Be Preferable to Relying Exclusively on Market Power Monitoring and Mitigation**

Determining how to address an existing market power problem is potentially difficult. Opting to impose new rules and regulations to curtail market power is one potential solution. For reasons articulated in our February 1998 comment to FERC on market power monitoring and mitigation proposals from the New England Power Pool (NEPOOL),(26) [a state] may wish to avoid relying exclusively on such behavioral rules. We summarize the drawbacks to relying exclusively on a behavioral approach in four points: First, it is likely to be difficult to detect and document the exercise of market power in many instances (NEPOOL Comment at 5). The need to balance supply and demand in electricity markets continuously and precisely makes electricity trades vulnerable to subtle and short-lived anticompetitive actions that are likely to go undetected because monitoring is complex and costly. Second, behavioral rules for market power mitigation will not eliminate incentives to exercise market power (*id.* at 6). Third, market power monitoring and mitigation rules create a risk that competitive behavior will be misidentified as anticompetitive behavior, thus chilling competition and increasing administrative and litigation costs (*id.* at 5). Fourth, focusing on behavioral remedies may divert attention from structural remedies that have the potential to address market power with greater certainty and lower costs to consumers (*id.* at 6).

## **C. ISOs Are Potentially Attractive Institutions for Addressing Many Market Power Issues in the Electric Power Industry**

Both horizontal market power and transmission discrimination concerns can be addressed by ISOs.(27) ISOs can be organized to reduce potential horizontal market power by including a broad geographic area with many separate generation firms. By eliminating pancaked transmission rates(28) and embracing an enlarged geographic area, ISOs can broaden the effective geographic market and thereby reduce market concentration in generation and consequently the likelihood of generation market power. A broader geographic market will not necessarily solve all the generation market power problems, but it can provide a major step in that direction.

If it is truly independent in its governance and operations, the ISO also eliminates transmission discrimination incentives by removing control of transmission assets from the hands of firms that own generation facilities. In addition, the ISO may have stronger incentives than traditional vertically integrated utilities to address generation market power in load pockets(29) that arise during periods of transmission congestion.(30)

If [a state] becomes involved in the formation of an ISO, it may wish to consider four danger signs warning of risks to competition in the ISO formation process:(31) (1) the ISO is too small; (2) there is no plan for generation restructuring; (3) the ISO is not sufficiently independent; and (4) the ISO plan does not effectively deal with transmission congestion.

## **D. Entry Considerations**

### **1. Context of Entry Considerations**

The implications of high market concentration may be affected by entry conditions. For example, the Department of Justice/Federal Trade Commission Horizontal Merger Guidelines (DOJ/FTC Merger Guidelines) describe these effects in the context of mergers.(32) In circumstances where entry is timely, likely, and sufficient to deter or counteract efforts to exercise market power, market concentration may not have adverse implications for consumers.(33) In our merger and competition advocacy work, we have found that full treatment of entry conditions, both present and future, is an important aspect of competition analysis.

### **2. Additional Consideration of the Evolution in Electric Industry Entry Conditions**

Technological and regulatory changes over the past decade have tended to ease entry obstacles in the electric power industry and may continue to do so. [There are two] possible forms of entry in the electric power industry.

The first form of entry is new or expanded generating capacity within the existing product and geographic market. The second form of entry is enhanced access to existing, but distant or isolated, generating capacity by virtue of new or expanded transmission capacity. Effective entry into an electricity generation market in some circumstances may be accomplished by increased transmission capacity even if new generation capacity is not installed. Entry through increased transmission capacity frequently broadens the relevant geographic market. Because a broader geographic market is likely to include more suppliers, increased transmission capacity may also reduce market concentration.

Both forms of entry have been affected by technological advances in the past few years. First, new combined-cycle, gas-turbine technology, in conjunction with deregulation of natural gas prices, has significantly reduced scale economies in electric generation and made such facilities far more competitive with coal-based generating plants.(34) Because the new natural gas generating facilities can be economical at a smaller scale, combined-cycle, natural-gas generating facilities take less time to design and build, have less lumpy effects on supply conditions, and involve fewer sunk costs. In short, the advances in generation fueled by natural gas may make entry more timely and likely. . .

Second, improved electric transmission technology makes expanded transmission capacity a more viable and better understood substitute for new generating capacity.(35) Improved understanding of the origins of and remedies for transmission congestion may aid in making transmission a more effective constraint on market power in electricity

markets.<sup>(36)</sup> Further, eased health concerns about high voltage transmission lines may help make expansions of the transmission grid more acceptable to those living and working near these facilities.<sup>(37)</sup>

### **E. [A State] May Wish to Use Computer Simulation Models to Help It Assess Horizontal Market Power and Structural Remedies for Market Power**

Recently, computer simulation models of generation and transmission that may facilitate analysis of market power issues have become more widely recognized and tractable.<sup>(38)</sup> Our experience in evaluating the PacifiCorp/Peabody merger evidences the potential usefulness of computer simulation models for the analysis of market power and potential structural remedies.<sup>(39)</sup> For example, by simulating various price increases and their effect on pricing in the relevant market(s), computer models can be used to determine relevant geographic markets in a merger analysis or to ascertain whether an entity is engaging in anticompetitive behavior. Various state regulatory agencies and reliability councils also incorporate computer simulation models in their long-range planning efforts. [A state] may wish to consider making use of such computer simulation models, if it has not already done so, to help it assess existing generation market power and potential structural remedies for such market power.

## **III. VERTICAL DISCRIMINATION IN TRANSMISSION ACCESS**

*FERC recently promulgated rules encouraging the voluntary formation of regional transmission organizations (RTOs) across the Nation. In doing so, FERC noted that its current behavioral rules for open transmission access (FERC Order Nos. 888 and 889) have not solved the vertical transmission discrimination problem in the electric power industry. Even under open access, vertically-integrated firms have a continuing opportunity to engage in undue discrimination in providing access to their transmission facilities and thus to impede competitive markets.<sup>(40)</sup> Without nondiscriminatory access to transmission, competition among generation suppliers is unlikely to be effective at the wholesale or retail level.*

*In comments to FERC prior to adoption of Orders 888 and 889, the FTC staff expressed concern that behavioral rules alone are unlikely to work very well in this industry because (1) they leave anticompetitive incentives to discriminate in place and (2) enforcement of antidiscrimination rules is likely to be particularly problematic. Since then, the FTC has recognized that vertically integrated firms have an incentive to exercise their market power at the transmission level both by discriminating against electric power suppliers in providing transmission facility access and by engaging in cross-subsidization in favor of their unregulated power marketing affiliates. These two forms of anticompetitive behavior, plus the cost of regulation, may be significant enough in some circumstances that separating the operation (and/or ownership) of the transmission grid from the ownership of affiliated power marketing interests should be the preferred solution to address market power at the transmission level. The text in Section A, presenting this argument, is adapted from the August 1995 FTC Staff Comment to FERC.*

*At the Electricity Public Workshop, presenters from several states and organizations emphasized why wholesale and retail levels of competition among generation suppliers should be considered together. In particular, presenters were concerned that retail competition would be less robust without effective wholesale competition. Presenters argued that unless open access policies are applied to a traditional utility's captive retail customers (i.e., its "native load" requirements), the utility will continue to have the incentive and ability to discriminate in providing access to its monopoly transmission and distribution assets.<sup>(41)</sup>*

*Other participants noted that the effectiveness of wholesale and retail competition depends on the physical transmission capacity serving the area and that expansion of wholesale transmission facilities may be a prerequisite for moving toward retail competition. These Workshop presentations underscored the importance of the maximum-geographic-scope element and the grid-expansion element in formation of RTOs. Effective RTOs can help broaden the geographic market (increase the number of generators) serving a state that implements retail competition. At the same time, it is important that customers be provided with price signals that accurately reflect transmission constraints and generation costs in peak and off-peak periods. In particular, the average pricing faced by many customers in peak periods understates the costs involved and, conversely, average pricing overstates the costs*

*involved to supply and deliver electric power during off-peak periods. Accurate price signals not only will increase the elasticity of demand at the wholesale level, but they can potentially curtail market power and reduce average costs facing all customers.*

*Section B, which is excerpted from the August 1999 Staff Comment to FERC on Regional Transmission Organizations, discusses the importance of ensuring that an RTO is independent from owners of electric power suppliers.(42)*

*Recent technological developments favoring the commercial viability of very small-scale generation units (microturbines and fuel cells), termed "distributed generation" or "DG," have added to concerns about discrimination in transmission access and have extended the policy discussion to distribution as well as transmission. DG may represent an emerging close substitute for transmission and distribution services because, as a form of generation, it can be located at, or very close to, load centers. If so, owners of transmission, distribution, and existing (but more distant) generation are likely to have incentives to impede the entry and spread of DG. DG is likely to be most economically viable, at least initially, as a method for customers to reduce peak-load demand on the power grid and improve reliability while continuing to be connected to the grid. Consequently, the most likely avenue for impeding the spread of this new technology is discrimination in connecting DG units to the transmission and distribution system. To the extent that DG connections to the grid are denied, delayed, or made more costly, incumbent transmission, distribution, and generation owners may realize greater profits while consumers may face higher prices and lower reliability. Section C, discussing DG, is adapted from the March 1999 FTC Staff Comment to the California Public Utilities Commission.*

## **A. Operational Unbundling Offers Significant Advantages Over FERC's Proposed Functional Unbundling Approach.**

### **1. Preventing Discrimination or Cost Shifting by a Regulated Monopolist Is Difficult.**

A monopolist whose rate of return is regulated has an incentive to evade the regulatory constraint in order to earn a higher profit. Its participation in an unregulated market may give it the means to do so, either by discriminating against its competitors in the unregulated market or by shifting costs between the regulated and unregulated markets.(43)

The discrimination strategy involves complementary products. The monopolist controls others' access to its regulated product in ways that permit it to earn supra competitive returns in its own operations involving the unregulated complement. Discrimination could appear as a subtle reduction in quality of service, whose effects would be more difficult to identify and measure than outright denial of access. An integrated transmission monopolist might afford other generation sources access to its transmission services only on terms that raise others' costs and permit the monopolist to make supra competitive profits in the generation market.

The cross subsidization or cost shifting strategy involves inputs used for both regulated and unregulated products. Costs of the shared inputs, which in the electric power industry might include scheduling and general overhead, are assigned to the regulated business to justify higher cost-based rates there. This shifting distorts competition and produces inefficiencies in the unregulated business as well. Controlling the discrimination and cost-shifting strategies with monitoring and regulation is difficult. They can be defeated most effectively by preventing the regulated monopolist from entering the unregulated business, thus eliminating its ability to distort competition in the unregulated market.

### **2. Operational Unbundling Is Likely to be More Effective And Less Costly Than Functional Unbundling in this Industry.**

[F]unctional unbundling . . . stops short of structural separation and thus leaves in place the anticompetitive opportunities and the monitoring and enforcement difficulties that are inherent in vertical integration between regulated and unregulated markets. Electric utilities that own or control transmission facilities would be required to offer an open-access tariff to other parties and to take transmission services for their own wholesale purchases or sales under that same tariff. Thus, the rules would require the utility to charge itself the same price, under the same terms, that it charges others for the same transmission service. . . . [R]etaining integrated ownership and control of transmission and generation services . . . could leave the integrated utilities with the incentive and opportunity to find ways to evade regulatory constraints. One way could be to manipulate the sensitivity of short-run transmission services to the risk of delay and uncertainty, which is inherent for this non-storable product. A transmission owner may be able to favor its own generating plants materially with subtle delays or complications in the transmission approval process.

Rules mandating open access and comparable treatment would be particularly difficult to monitor and enforce in this industry, because, to succeed, the rules must constrain transmission owners to ignore their economic interests. Ensuring that the services and prices the integrated utility provides to and charges its competitors are equivalent to what it provides to and charges itself could require virtually transaction-by-transaction regulatory oversight. Monitoring and enforcing compliance with regulations against discrimination may be particularly difficult when quality of service is time sensitive, as it is in electric power. Because power is sold on an hourly basis, market dynamics -- and thus the incentive and ability to exploit market power -- can shift over the course of each day, making it virtually impossible to intervene before conditions have changed. Hemming in transmission owners' behavior, although perhaps possible in theory, will be difficult to maintain in practice. Successfully containing their behavior at one time and place may provide little assurance of containing it later or elsewhere.

Complete divestiture would resolve the competition problem better than regulation of behavior. Complete separation of both ownership and control can provide the best assurance against the anticompetitive incentives and capabilities of combined operations. Divestiture also avoids the expense and intrusiveness -- and perhaps futility -- of monitoring and controlling a firm's day-to-day behavior.

On the other hand, complete divestiture, curtailing vertical integration to prevent anticompetitive behavior, may sacrifice economies of scope between the regulated and unregulated markets. A regulated monopolist's participation in the unregulated market might be desirable if it would realize scope economies that outweigh the anticompetitive distortions.<sup>(44)</sup> In the electric power industry, there may be economies of scope in coordination between output and transmission and in planning, or in lower average inventory, personnel, or reserve requirements.<sup>(45)</sup>

In antitrust enforcement, divestiture is the remedy most commonly sought for anticompetitive mergers or monopolization. In some cases, remedies short of full divestiture have been applied, to preserve the efficiency benefits of a combination while addressing its competitive problems. A constant concern in devising orders short of full divestiture is how to monitor compliance to prevent competitive abuse. The only compliance oversight required for divestiture is ensuring that the divestiture takes place. By contrast, continued monitoring is required to assure compliance with behavioral or intra-firm structural orders. Ordering a firm to afford access is futile if the price it charges or the cost of monitoring its compliance are too high. . . .

Because functional unbundling alone may not be effective, and both it and complete divestiture may be more costly to implement, a middle-way "operational unbundling" approach should be favorably considered. By operational unbundling, we mean structural institutional arrangements, short of divestiture, that would separate operation of the transmission grid and access to it from economic interests in generation.<sup>(46)</sup> The purpose would be to prevent the regulated transmission monopolist from influencing the potentially competitive wholesale generation market. Separating ownership of generating facilities from control of transmission would reduce the incentives and ability to exercise transmission market power.<sup>(47)</sup> By separating ownership from control, operational unbundling captures a primary advantage of divestiture by affording a high level of assurance -- at least as high as functional unbundling, if not higher -- that nondiscriminatory practices and rates will prevail.<sup>(48)</sup> Operational unbundling would not incur the costs of enforcing behavioral rules, because the firms would have less incentive and ability to discriminate. It should

be at least as effective as functional unbundling in ensuring against discrimination, and it would be much less costly to implement than divestiture, because only operation, not ownership, would be structurally separated.(49)

## **B. Independence Minimum Characteristic**

The basic issue underlying why transmission should be independent of generation in a qualified RTO is the threat of vertical discrimination in access to transmission services. Vertical discrimination in transmission is a serious concern because transmission technology continues to exhibit major economies of scale that often preclude effective competition in providing alternative transmission services between generation sources and loads.(50) The perceived threat of vertical discrimination in transmission raises the risks associated with investments in both generation and obtaining electricity trading skills (training and experience) in order to compete with generation assets owned by the operators of transmission assets. This perceived risk discourages entry by generating firms and traders, making effective competition in generation less likely. Reduced supply (less generation entry) and thinner markets (less trading) are likely to result in higher prices for consumers than would exist absent such potential transmission discrimination.

Concerns about vertical discrimination in transmission access are not limited to existing transmission and generation assets, but rather apply to expansions of generation and transmission as well. Transmission owners could discriminate in providing grid connections to new generators and in selecting transmission expansion projects. Discrimination or uncertainty about the terms and conditions for obtaining connections to the grid will raise the risk of new generation investments with respect to their commercial viability and timing. Discrimination in the selection of future grid expansion projects may disrupt such project[s] by similarly increasing uncertainty about future revenues of entrants (for example, discriminatory positioning of a new transmission line may disproportionately reduce demand for power from the entrant). By eliminating or delaying generation entry, or deflecting it to a different site, a transmission owner may reduce the competitive pressure on its own generation assets, particularly if the prospective entrant's assets are likely to be more efficient.(51) As a result of such discrimination, consumers are likely to face higher electricity prices because more efficient generators fail to enter to displace less efficient generators.

In addition, we concur with the assessment in the Notice that affiliated transmission companies . . . may not be trusted by market participants even with elaborate protections. . . . We believe that market participants are likely to suspect that the safeguards will be gamed. This, in turn, could affect investment behavior. In particular, market participants may be reluctant to make needed investments in generation or marketing of electricity if they believe that the RTO is likely to give favored treatment to its affiliates.(52)

We also agree that behavioral codes of conduct are unlikely to solve this problem because of enforcement costs and uncertainties.(53) . . .

In order for an RTO to be independent, [it may be necessary] to distinguish between voting interests and passive investment interests . . . . To the extent a non-voting, passive investment interest insulates this type of investor from the RTO's decisions regarding operations, planning, and expansions, a non-voting interest is less likely to undermine the independence minimum characteristic. Although we are reluctant to advocate an inflexible prohibition on voting rights for owners of generation assets located within the RTO, we note that exceptions to any rule may grow into a serious breach over time.(54) In order to provide . . . a benchmark for [the] independence criteria, we provide here a brief review of such criteria in the antitrust enforcement context. We do not view this as definitive with respect to FERC's consideration of an appropriate de minimis standard, but merely as informational.

The loss of independent decision-making - whether sacrificed in a collusive arrangement or destroyed by the anticompetitive unilateral exercise of market power - is an overarching concern of antitrust enforcement. Two areas in which antitrust law attempts to guard against this loss of independence may offer FERC useful perspectives.

First, Section 8 of the Clayton Act(55) prohibits interlocking directorates among competing firms. No person may serve as a director or officer of competing corporations if each firm has an aggregate total of capital, surplus and

undivided profits exceeding \$10,000,000.(56) Although FERC's Notice incorporates a similar provision based on share of control, FERC may also find it useful to consider whether common directorships in third parties may be used to circumvent the basic prohibition.

Second, the FTC sometimes permits firms to merge provisionally, subject to a "hold separate" agreement that maintains each firm's structural and operational independence while the FTC completes its review of the transaction. Such temporary hold separate agreements frequently prohibit the merger partners from mingling the firms' assets or operations; having common directors, officers or employees; exercising voting rights in each other (other than a de minimis exercise that may be necessary for tax purposes); attempting to influence each other's voting shareholders; and communicating with each other.(57) Prohibitions such as these may be adapted to the electricity market to secure both the complete independence, and the appearance of independence, of RTOs and market participants.

Even if FERC adopts a specific de minimis standard, it must be alert for potential coalitions of common interest -- for example, a group of generation owners with similar incentives and RTO ownership interests that could undermine the independence of an RTO. With an ownership de minimis standard applied only against individual ownership interests, such a coalition could make possible the type of vertical discrimination of concern in electric power markets.(58)

In addition, even with a low de minimis standard, we alert FERC to possible conduct that antitrust enforcers confront. Although operational unbundling or divestiture minimizes the likelihood of discriminatory access to transmission, there are less direct ways in which anticompetitive influence can be used to foster discrimination. Important antitrust cases have been decided where indirect pressure or influence has been applied to advance common ownership interests against structurally independent firms.(59) We invite FERC to be alert to this type of anticompetitive behavior as well.

### **C. Distributed Generation and Competition in Electric Distribution Service in California**

Over the past several decades, generation has been highly centralized in large generation facilities. Customers are served primarily by utility distribution companies (UDCs) that have connections to large generation facilities using high voltage transmission lines and connections to customers through their lower voltage distribution lines. This grid system is referred to as the transmission and distribution (T&D) system. In an electrical system with DG, smaller, widely-dispersed generation units would supply electric power in addition to (or instead of) centralized facilities. . . .

In general, advances in DG technology offer substantial potential benefits to consumers, but the rate and extent of DG implementation have yet to be determined and there are some potential costs of DG use as well. DG also faces potential discrimination in connecting to the grid from vertically integrated, incumbent suppliers in light of DG's potential to increase competition in generation, transmission, and distribution. Realizing these potential benefits may depend upon [a state] affording DG units a fair market test. A fair market test requires technical interconnection rules allowing DG units to connect to the T&D system without undue discrimination and unnecessary technical requirements left to the discretion of incumbent generation and T&D suppliers. [A state] is likely to benefit consumers by first addressing the conditions necessary for a fair market test of DG and then addressing the broader, longer-term questions of distribution competition. The results of a fair market test in terms of DG's market acceptance might provide additional guidance to [a state commission] as it examines the issue implicated by increased competition in generation, transmission, and distribution.

## **IV. AFFILIATE TRANSACTIONS**

*The risk of vertical discrimination in transactions between regulated utilities and their unregulated affiliates (which may be engaged in supply of generation or metering and billing services, etc.) arises in many contexts as states allow consumers to choose their electric power supplier. In Chapter III, vertical discrimination regarding access to transmission was discussed. The concern in that discussion was that incumbent transmission owners may raise the costs of actual and potential generation and marketing for competitors by charging higher prices, providing inferior*



service, or denying access to important transmission facilities. In doing so they would advantage their own affiliates engaging in the same unregulated businesses.

The chief concerns in the context of affiliate transactions in retail competition typically include discrimination as well as cross-subsidization or cost-shifting that favors the unregulated affiliate relative to its competitors. Consumers are harmed because discrimination and cross-subsidization may displace more efficient and innovative competitors and shift production to less efficient suppliers.

Most states have rules or codes of conduct against cost shifts and cross-subsidization already in place because of the traditional concern about burdening ratepayers with unrelated costs.<sup>(60)</sup> Retail competition and the associated unbundling of services, however, have raised the importance of these rules. Participants in the FTC Electricity Public Workshop confirmed that these issues continue to be difficult and contentious for state regulators. For example, some participants noted that traditional utilities control the cost of inputs of their retail competitors because the utility has full access to customer consumption or load profile information (which is necessary for a utility's competitors to prepare price offers to potential customers) as a result of the utility's continued monopoly control over distribution services. As a result, the utility has the incentive to discriminate in providing access to this information to increase its competitors' costs to serve retail customers.

The FTC staff has addressed both the general question of the effectiveness of codes of conduct that govern the relationship between a utility and its unregulated affiliate(s) and the specific question of what types of provisions should be included in a code of conduct. The staff also has suggested that states periodically reexamine the effectiveness of their code(s) of conduct to determine whether a structural approach, rather than a behavioral approach, would be more effective in promoting effective competition. Sections A and C are excerpted from the January 1999 FTC Staff Comment to the Alabama Public Service Commission regarding codes of conduct. Section A examines alternative ways of structuring affiliate rules in the context of a cost/benefit framework in which the state has already determined that there are substantial, but not overwhelming, economies of vertical integration. Section B is adapted from the December 1999 Comment to the New Mexico Public Regulation Commission and describes how concepts from antitrust analysis can be used to assess efficiencies of vertical integration. Section C discusses why codes of conduct that include market-like mechanisms, which govern transactions between a regulated parent and an unregulated affiliate, are likely to reduce the ability of the regulated parent to favor its unregulated affiliate in an anticompetitive manner.

During the FTC Electricity Public Workshop, presenters discussed another difficult issue regarding the relationship between the incumbent and its affiliates, namely, incumbency advantages -- such as name recognition and customer inertia -- that accrue to unregulated affiliates.<sup>(61)</sup> Because the growth of competition in telecommunications has been reported to be slow, some participants expressed the view that steps need to be taken to speed the transition to competition in the electric power industry. Others expressed concern that steps to speed the transition to competition might unfairly favor entrants over incumbents, with a resulting loss of efficiencies. The excerpt in Section D from the January 1999 FTC Staff Comment to the Alabama Public Service Commission describes a cost/benefit approach that state utility commissions may want to use to assess these incumbency advantages.

Because the costs and benefits of alternative approaches to this issue are unlikely to be uniform across jurisdictions or across specific policy options, a case-by-case cost/benefit analysis appears to be the best approach. In such an assessment, it is important to distinguish incumbency advantages based on accurate consumer perceptions from those that may be based on misperceptions. For example, in developing default service policies, some consumers may elect not to choose because they believe that they will maintain the status quo by not choosing. However, the state's decision to implement retail competition arguably means that the status quo no longer exists as an option. Similar issues of consumer perception are featured in the section below on use of the regulated distribution firm's name and logo by its unregulated affiliates. Indeed, evidence presented during the FTC Electricity Public Workshop indicated that consumers may be confused when an affiliate uses a name or logo similar to that of its completely separate parent.<sup>(62)</sup>

## **A. Initial Assessment of Vertical Efficiencies**

[A state commission] may wish to assess whether significant existing or prospective economies of vertical integration will be lost if it allows incumbent utilities to establish affiliates to offer unregulated services. Such an assessment could alleviate some uncertainty about the costs and benefits of different policy options. If economies of vertical integration are minimal, divestiture at the outset of regulatory reform may be more appropriate than the proposed behavioral rules. Conversely, if economies of vertical integration are substantial, [a state commission] may wish to consider whether any type of separation of a utility from its affiliates is likely to yield net benefits. Recent empirical evidence suggests that economies of vertical integration in the electric power industry may be material, but that they vary considerably in different circumstances and may be realized through alternative organizational arrangements.<sup>(63)</sup> Given this evidence, it seems reasonable to assume initially that vertical integration produces at least modest economies.

An initial assessment of the relative magnitudes of likely costs and benefits is often an appropriate step in policy analysis because it allows the inquiry to be terminated or focused on critical issues at an early stage before extensive resources and time have been consumed on detailed investigation of facts that are unlikely to materially address the balance of costs and benefits.

## **B. Application to Transactions between Public Utilities and Their Unregulated Affiliates**

The most difficult application of an affiliate code of conduct is likely to occur when a proposed transaction between the regulated utility and its unregulated affiliate substantially increases the likelihood of both anticompetitive effects and of efficiency gains. A similar policy balance of competitive concerns and efficiency opportunities lies at the core of antitrust policy toward mergers and joint ventures. [A state commission] may be able to benefit consumers by applying the insights from antitrust policy regarding these potentially offsetting effects to the context of the proposed affiliate code of conduct.

Within antitrust analysis, only efficiencies that are specific to a proposed transaction are relevant to the competition/efficiency policy assessment. Other efficiencies may be obtained without an accompanying threat of diminished competition. For example, economies of scale may be realized when a regulated utility and one of its unregulated affiliates jointly operate a single billing organization. Such economies are not, however, specific to this transaction, if similar economies practically can be realized by the regulated utility and the unregulated affiliate if they partner instead through a joint production venture with one or more unaffiliated firms, or by contracting for the service through an independent provider.

In the merger context, the antitrust agencies have adopted guidelines that explain how the agencies consider efficiencies when considering the competitive impact of a merger.<sup>(64)</sup> In particular, the agencies only consider those merger-specific efficiencies that offset competitive concerns. Although the following excerpt from the Horizontal Merger Guidelines discusses horizontal mergers, the same analysis is appropriate to evaluate efficiency claims when examining the competitive effects of vertical transactions, because significant competitive problems can arise in either context.

The Agency will consider only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects. These are termed 'merger-specific efficiencies.' Only alternatives that are practical in the business situation faced by the merging firms will be considered in making this determination; the Agency will not insist upon a less restrictive alternative that is merely theoretical.

Efficiencies are difficult to verify and quantify, in part because much of the information relating to efficiencies is uniquely in the possession of the merging firms. Moreover, efficiencies projected reasonably and in good faith by merging firms may not be realized. Therefore, the merging firms must substantiate efficiency claims so that the

Agency can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific. Efficiency claims will not be considered if they are vague or speculative or otherwise cannot be verified by reasonable means.

'Cognizable efficiencies' are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.

The Agency will not challenge a merger if cognizable efficiencies are of a character and magnitude such that the merger is not likely to be anticompetitive in any relevant market. To make the requisite determination, the Agency considers whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm consumers in the relevant market, e.g., by preventing price increases in that market...(65)

[A state commission] may wish to use this efficiency analysis analytical framework in making the preliminary assessment of whether to require vertical separation between a public utility and its unregulated affiliates.

In addition, the framework may be applicable as well in assessing the efficiency benefits of a particular joint activity between the public utility and its unregulated affiliate(s).(66) Given widespread evidence of continued vertical discrimination concerns in the operation of the transmission grid(67) and similar incentives that regulated utilities have to favor their unregulated affiliates in other aspects of their operations, [a state commission] may wish to take into account the strong likelihood that certain joint activities or substantial transactions(68) between a regulated utility and one of its unregulated affiliates, other than an arms-length purchase in an open market, represent a potential threat to competition. If so, [a state commission] may wish to consider requiring that the regulated utility demonstrate strong cognizable efficiencies sufficient to offset potential anticompetitive effects before the regulated utility engages in a particular joint activity or consummates a substantial transaction with one of its unregulated affiliates.(69)

### **C. Limits on Transactions Between Regulated Utilities and Their Unregulated Affiliates**

As discussed above, we have significant reservations about the effectiveness of relying exclusively on behavioral rules [to discourage discrimination in transactions between regulated utilities and their unregulated affiliates]. If the scale, scope, or vertical integration economies of affiliation are substantial and can be realized even in the presence of functional unbundling, [a state commission] may wish to strengthen its approach by requiring the affiliates to operate independently, on a bid-based, arm's-length basis. For example, [a state commission] may wish to require that the bulk of regulated utility purchases from unregulated affiliates be restricted to contracts won through an objective bidding process in which a third party evaluates the bids.

A critical element of workable bidding systems is the perceived and actual objectivity of the bid evaluation process. The system must be perceived as objective in order to attract bidders. Potential bidders, other than affiliates, may be unwilling to incur the costs of making a bid if the system is perceived as biased in favor of affiliates. The system must also be objective in fact in order to avoid raising costs for customers of the regulated utility. The use of third-party evaluations of the bids is one technique for achieving such objectivity.(70)

In addition, [a state commission] may wish to consider restrictions on asset transfers from the parent distribution utility to an affiliate. Some states are considering making such transfers subject to particular price bounds to assure that ratepayers do not unfairly subsidize the activities of the affiliate.(71) This proposal raises issues similar to determining the value of assets in assessing stranded costs. Just as some states, such as Massachusetts, have determined that the market is the best gauge of value to determine the value of generating assets in a stranded cost assessment,(72) [a state commission] may wish to use actual market values, rather than a band of prices, for asset transfers. The arm's-length bid process discussed above is an example of a method to establish actual market values.

## D. Benefits and Costs of Allowing Unregulated Affiliates to Use the Parent, Regulated Distribution Firm's Logo

[A state commission] may wish to compare the benefits and costs of allowing affiliates of regulated distribution firms to use the corporate logo of the distribution firm.<sup>(73)</sup> One benefit of such use may be to reduce prices in the competitive markets served by affiliates. With access to the parent company's logo, the affiliate is likely to have lower marketing costs that may be passed along to consumers in a competitive market.<sup>(74)</sup> The lower prices of the affiliate may encourage other firms serving this market to charge lower prices as well, resulting in lower prices for the market as a whole.<sup>(75)</sup> If consumers' perceptions of the implications of an affiliate's use of the parent utility's logo are accurate,<sup>(76)</sup> a second prospective benefit may be reduced search costs for consumers.

On the cost side, we have identified two potential concerns about the use of logos by affiliates: deception of consumers and cross-subsidization.

(1) Potential Deception: [This is discussed in Chapter VIII.]

(2) Potential Cross-subsidization and the Use of the Parent Utility's Logo: Although some forms of cross-subsidization may be effectively addressed by transfer pricing rules,<sup>(77)</sup> other forms may be more difficult to assess. Cross-subsidization could take the form of cost-shifting among inputs used for both regulated and unregulated products, such as the use of a corporate logo in marketing the affiliate's products and services as well as the regulated parent utility's products and services. Costs of shared inputs could be assigned in a biased manner (*i.e.*, with additional costs assigned to the regulated side of the business) so that the regulated entity can justify higher rates. This biased assignment of costs, which is often difficult for regulators to detect and remedy, distorts competition and produces inefficiencies in the unregulated business as well.

The risk of failing to detect anticompetitive cross-subsidization is heightened if (1) the reputation of the regulated parent utility is effectively embodied or represented by its logo; (2) the regulated parent firm can improve its reputation by incurring costs of the type that regulators would traditionally include in the rate base of the regulated firm; and (3) the unregulated affiliate can enhance its own reputation among consumers by using the logo of the regulated parent firm, even if elements of the regulated firm's reputation do not apply to the affiliate. When these factors are present, a regulated incumbent will have a heightened incentive to overinvest in reputation-building because it can expect to incorporate a greater share of these investments into its rate base than if the assets were not shared with the affiliate. Moreover, the affiliate would realize additional profits from its increased sales in the unregulated market. The principal obstacle to deterring this conduct is that it may be extraordinarily difficult to distinguish competitive from anticompetitive levels of investment in reputation-building. Harm to competition and consumers may result from such overinvestment and subsequent cross-subsidization.

Harm to competition may occur because the unregulated affiliate's access to the logo of its regulated parent gives it a cost advantage through potential cross-subsidization that otherwise equally efficient competitors cannot match. The anticompetitive results may include (1) higher-than-necessary average operating (*i.e.*, non-logo-related) costs for the industry and higher prices for consumers due to the continued operation of the affiliate, which can survive with higher-than-necessary costs due to the cross-subsidization; (2) greater market concentration and less competition than would occur absent the cross-subsidization;<sup>(78)</sup> and (3) discouragement of potential entry that likely would have occurred absent the cross-subsidization, including entry involving innovative products and production processes.

If [a state commission] upon more detailed study determines that there are substantial economies of vertical integration that cannot be realized without allowing affiliates to use the logos of their respective regulated parent utilities, [a state commission] may wish to consider two policy alternatives that are designed to obtain some of the potential benefits of affiliate use of the parent distribution firm's logo without incurring the costs. First, some states are considering allowing the use of the logo by affiliates, contingent upon use of a disclaimer that avoids consumer deception. [A state commission] may wish to evaluate this alternative by examining the impression that consumers are likely to have with the use of the logo accompanied by a disclaimer, and whether that impression would be

accurate.<sup>(79)</sup> Consumer research designed to investigate the effects of several alternative policies on consumers may be the most effective approach.<sup>(80)</sup> A disclaimer that suffices to avoid consumer deception also may suffice to discourage cross-subsidization in the form of excessive investment in reliability.

Another alternative for transfer of the rights to use the parent firm's logo is to require that the affiliate (and any other firms granted the right to use the logo) pay the parent for the right to use the logo.<sup>(81)</sup> Because the logo is an asset, use of the logo by other firms, including affiliates, represents an asset transfer from the parent firm, and [a state commission] may wish to treat it like other asset transfers.<sup>(82)</sup> In order to avoid cross-subsidization in such a transaction, the use of the parent logo must be fairly evaluated.<sup>(83)</sup>

## V. HORIZONTAL MERGERS

*Competition reviews of horizontal mergers in the electric power industry are conducted by FERC, the FTC, and the United States Department of Justice (DOJ) using the framework of the Horizontal Merger Guidelines. The Horizontal Merger Guidelines were developed by DOJ and FTC and subsequently adopted by FERC as the conceptual framework for its merger reviews. FTC staff has commented to FERC on the evidentiary difficulties of conducting an effective merger review in the electric power industry. The same concerns about access to information and appropriate methods for assessing market definition, market structure, competitive effects, entry conditions, and failing assets are likely to apply to state reviews of retail competition in the electric power industry. Because of the large number of relevant scenarios for assessing the effects of mergers in the electric power industry and because of the technical complexities of this industry (e.g., loop flows and hourly markets), the FTC staff has recommended that both FERC and the states consider using computer simulation modeling to aid the analysis of the market power effects of mergers in the electric power industry. The text below is excerpted from the September 1998 FTC Staff Comment to FERC in a proceeding designed to determine whether to revise the information filing requirements that electric utilities must provide to FERC with their merger approval application. These same recommendations are applicable to state reviews of electric utility mergers as well.*

### A. Introduction and Summary

The primary theme of our comment is that an analysis of market share information is often the ramp that leads antitrust agencies to a more sophisticated merger analysis. In light of this, FERC, where appropriate, may wish to expand its merger analysis beyond its current strong emphasis on market share information. Such an expansion has implications both for the information FERC collects and for the analysis it conducts. As part of an expanded analysis, computer simulation modeling may be a particularly promising development that may make it more feasible for FERC to consider alternative scenarios about future technical, economic, and regulatory conditions in its electricity industry merger reviews. We recognize that expanding FERC's merger analysis may entail significant costs to the agency, to the merging parties, and to interested third parties. Such costs, however, may be a necessary prerequisite to a complete and more accurate assessment of the likely competitive effects of proposed mergers.

### B. Expanded Data Requirements for Merger Analysis

Merger analysis under the Horizontal Merger Guidelines is by its nature an information-intensive task once a preliminary analysis reveals a potential for anticompetitive effects. Many important questions about the competitive effects of mergers are best answered with documents, interviews, and data from many sources.<sup>(84)</sup> The evolution of our Horizontal Merger Guidelines reflects an expanded consideration of facts and approaches. FERC may be better able to protect the public interest as it reviews proposed mergers in the rapidly changing electric power industry by revising its information-gathering process to more closely match the information requirements of the Horizontal Merger Guidelines and to improve understanding of vertical competition issues.

To analyze prospective competitive effects of a proposed merger beyond reviewing market share statistics submitted by the merging parties, as well as to assure the accuracy of market share statistics, we have found various sources of data to be important in our merger investigations. Although only some of these sources are likely to be relevant in any

individual investigation, FERC may wish to obtain each where appropriate and cost-effective. Sources used in our merger investigations often include, for example, the following:

- internal documents of the merging parties (including, for example, planning and marketing documents; merger assessments; evaluations of current and projected technology; cost, quality, and reliability comparisons of firms and their individual production facilities; and joint venture documentation);
- third-party documents, including documents from industry trade associations;
- depositions of party and third-party executives and consultants;
- history of previous antitrust cases (including collusion cases involving the same companies or the same industry);
- financial analysts' reports;
- employee notes concerning contacts with competitors;
- consultants' reports on competitive conditions in the industry;
- documents and interviews with executives of failed entrants, prospective entrants, and fringe firms;
- filings about competitive conditions made with other government agencies;
- documents and interviews with suppliers; and
- documents and interviews with a variety of customers. . . .

### **C. Alignment with the Horizontal Merger Guidelines Framework of Analysis**

We have identified seven aspects of electricity merger analysis covered by the Notice that FERC may wish to consider from this perspective. On the basis of our experience, each of these aspects may be significant in determining the prospective effects of a merger on competition and consumers. Accordingly, FERC may wish to revise both its information-gathering procedures and the types of information it gathers in screening mergers to enhance its merger analysis.

(1) Hypothetical Price Increases in the Presence of Elevated Pre-Merger Prices<sup>(85)</sup> -- A key element in merger reviews is determining the economic arena in which the competitive effects of a merger are likely to take place. The economic arena is defined geographically as well as with respect to the product or service likely to be affected. Both product and geographic market assessments under the Horizontal Merger Guidelines are carried out by asking whether a hypothetical monopolist would profitably impose a small but significant and nontransitory price increase.<sup>(86)</sup> Typically, the price increase is applied to pre-merger prices to conduct the analysis. Thus, in defining the market, the Horizontal Merger Guidelines generally focus on the possibility of incremental market power due to a merger.

This approach may not be appropriate in a newly deregulating industry, such as the electric power industry, where pre-merger market power may have been created or protected by regulations that are no longer in place or are likely to be relaxed. The Horizontal Merger Guidelines recognize this possibility in Section 1.11, where they specify that "the Agency may use likely future prices, absent the merger, when changes in the prevailing prices can be predicted with reasonable reliability." Changes in price may be predicted on the basis of, for example, changes in regulation which affect price either directly or indirectly by affecting costs or demand.<sup>(87)</sup> FERC may wish to recognize explicitly that this alternative definition of price may be particularly relevant in the electric power industry, where past restrictions on entry, regulatory limitations on the variety of services offered, and reduced incentives to operate efficiently and competitively (associated with rate-of-return regulation) may have elevated prices above competitive levels.

(2) Duration of Anticompetitive Effects<sup>(88)</sup> -- FERC asks how long a binding transmission constraint must persist to be deemed significant. This problem commonly arises in electricity markets where peak demand periods, with binding transmission constraints, are likely to be limited to certain hours of the day during certain seasons of the year. A typical example would be weekday afternoons during the summer months. Because electricity cannot be economically stored in large quantities,<sup>(89)</sup> electricity supply and demand must be continuously balanced. Consequently, supply and demand conditions within short time intervals may be independent of each other in most respects. This may require defining electricity sales during, for example, individual hours as separate product markets, each of which may have a different geographic market associated with it. The relevant geographic market during peak demand periods is likely to be smaller than during off-peak periods because transmission congestion during peak periods may reduce or eliminate the ability of distant generators to compete. In examining the importance of a transmission constraint of short duration, FERC may wish to consider that although a transmission constraint may be of short duration, it may have large price effects<sup>(90)</sup> in a large area.<sup>(91)</sup> Such conditions (and effects) are likely to recur.

The likelihood that product markets may be defined on an hourly basis in the electric power industry raises another potential complication in analyzing mergers in this industry. During some hourly periods (product markets), a proposed merger may increase the likelihood of higher prices or other competitive harm. For example, during peak load periods when transmission is constrained, the proposed merger might give rise to market power in the generation of electricity. During other hourly periods (product markets), the same proposed merger may provide merger-specific, cognizable efficiencies. For example, the merger might provide merger-specific generation efficiencies through reduced reserve requirements that allow plants with lower marginal costs to be used for reserves.<sup>(92)</sup> In such circumstances, FERC may be faced with the necessity of balancing anticompetitive effects in some product markets against efficiencies in other product markets that are served by the same assets, and that have substantially overlapping relevant geographic markets.

Under the Horizontal Merger Guidelines, such tradeoffs may be considered only where efficiencies in different markets are inextricably linked to the relevant market, as they are likely to be in the example above.<sup>(93)</sup> FERC may thus wish to consider techniques for examining the degree of linkage between efficiencies in different electricity product markets (e.g., electricity sold on an hourly basis), and whether to seek remedies that affect the same generation assets differently in different time periods.

(3) Potential Competition Concerns<sup>(94)</sup> -- Because competition may be harmed by mergers that stifle potential competition as well as by those that harm actual competition, antitrust agencies examine mergers for effects on potential competition, even if they appear to present little threat to existing competition. Potential competition issues may be important in formerly regulated industries where restraints on potential entrants may have been in place. The FTC's recent Questar/Kern River case presented such an issue in the natural gas pipeline industry.<sup>(95)</sup> Similar situations may arise in the electric power industry.

FERC may wish to acknowledge that its analysis of electric power industry mergers under the Horizontal Merger Guidelines will cover potential competition effects and that FERC will incorporate this concern into its analysis generally.<sup>(96)</sup> Accordingly, FERC may wish to remove or restrict its proposed de minimis exception to the filing requirements for geographically discontinuous operations. This would allow FERC to take into account the possibility that mergers of geographically discontinuous operations<sup>(97)</sup> may nonetheless involve potential competition issues.

(4) Rate Cap Effects Compared to Competitive Markets<sup>(98)</sup> -- FERC may find situations in which behavioral remedies, such as rate caps, are appropriate, although structural remedies are generally more effective and less costly to enforce. A rate cap is often intended to replicate the constraint on prices that competition would impose. Often a rate cap takes the specific form of a freeze on current rates. Like competition, a rate freeze operates to prevent prices from going higher due to market power; unlike competition, however, it does not take into consideration the downward pressure on prices in competitive markets from technological advances in production techniques and product design.<sup>(99)</sup> Thus, a rate cap that does not include consideration of technological advances may allow suppliers to exercise market power by charging higher prices than they would under competition. To help

ensure that a rate cap effectively reduces the exercise of market power, FERC may wish to consider requiring adjustments in such rate caps over time to reflect anticipated changes in costs due to technological and organizational advances.(100) We note that the rate caps adopted in the electricity reforms in the U.K. included a downward adjustment to account for technical progress.(101) As an alternative, FERC may wish to establish a lower fixed rate cap initially, to create an expected stream of income equivalent to the technological adjustment approach.

(5) Entry and Efficiency Considerations in Merger Screening Analysis(102) -- The Horizontal Merger Guidelines include consideration of entry conditions and efficiencies,(103) and such factors sometimes reveal that market share concentration statistics overstate the degree of competitive concern associated with a proposed merger. For example, consideration of entry conditions may become more important in markets for electric power as costs for smaller-scale generation facilities, with shorter construction periods and fewer siting problems, fall relative to those of large-scale generation facilities. We have in some instances extended our merger screening analysis to include evidence of likely, timely, and sufficient entry and substantial, verifiable, merger-specific, and cognizable efficiencies. FERC may wish to consider explicitly allowing its merger screening process to include these elements as well.

(6) Product Differentiation -- Although electricity is homogeneous in a physical sense, it is subject to differentiation as a product or service. Such differentiation is likely to increase over time as suppliers pursue incentives to respond to variations in customers' demands for electricity.(104) For example, as retail competition is introduced in various states, consumers will be able to express a preference for power from different fuel sources. Firms also could be differentiated by different brand names or levels of service quality. Statutory requirements also may differentiate suppliers.(105) FERC may wish to acknowledge that differentiation may alter the degree of substitutability between electricity from different sources and may thereby affect the assessment of product markets, geographic markets, and competitive effects.(106)

Information on differentiation is critical in the evaluation of competitive effects under a unilateral market power theory. "A merger between firms in a market for differentiated products may diminish competition by enabling the merged firm to profit by unilaterally raising the price of one or both products above the premerger level. Some of the sales loss due to the price rise merely will be diverted to the product of the merger partner and, depending on relative margins, capturing such sales loss through merger may make the price increase profitable even though it would not have been profitable premerger."(107) Accordingly, FERC may wish to amend its filing requirements to include information sufficient to examine this possibility, including marketing plans, analysis of generation capacity, and quality of service assessments.

(7) Economic Performance Measures(108) -- FERC states that its concerns in reviewing mergers are price increases and output decreases. These economic performance measures are employed by the antitrust agencies as well, but merger analysis under the Horizontal Merger Guidelines also refers to the effects of mergers on quality, innovation, and customer choice among product designs.(109) Given ongoing regulatory and institutional changes in the North American Electric Reliability Council, FERC may wish to indicate that it will consider effects on reliability (quality) in analyzing electricity industry mergers (because quality decreases are equivalent to price increases). More generally, FERC may wish to acknowledge that its merger analysis and merger screening will consider effects on these additional forms of economic performance that are likely to affect consumers.

## **D. Analysis of Alternative Scenarios**

FERC may wish to take advantage of advances in computer simulation modeling techniques to examine more alternative scenarios about future technical, economic, and regulatory conditions in its merger evaluations. FERC's merger analysis is likely to confront numerous technical and factual issues that can significantly influence the conclusions reached. Analysis of alternative scenarios is likely to be particularly useful with respect to defining relevant product and geographic markets and estimating market concentration. Broadly speaking, analysis of alternative scenarios allows FERC to consider various conditions that are critical in assessing the likely competitive effects of a proposed merger. We identify four areas for analysis of alternative scenarios that FERC may wish to consider.



(1) Variations in Underlying Parameters for Geographic Market Analysis -- The Notice recognizes that applicants may face choices among sources and methods for calculating pre-merger prices in the destination markets that are relevant to FERC's proposed horizontal and vertical merger screens.<sup>(110)</sup> This discretion can affect the values of the parties' pre-merger price estimates. In turn, these estimates can affect whether the applicants will be required to file a horizontal or vertical competitive analysis and whether the merger will ultimately be set for hearing.<sup>(111)</sup>

Under FERC's proposed filing requirements, merger applicants would be asked to make their best efforts to provide or estimate data that they may not possess. As a result, important data might well contain errors. When there is uncertainty about the data, parties also would have incentives to bias the data in favor of the acquisition. Analysis using different scenarios about the nature and extent of errors could reveal the degree to which results would be robust against errors or bias in data or in any surrogate data submitted by applicants.

(2) Native Load -- The Notice raises questions regarding the treatment of native load in merger analysis. In simple terms, native load encompasses certain contractual and regulatory obligations of electric utilities to serve existing customers. These obligations may dissipate over time because of, for example, retail deregulation or the expiration of contracts. For instance, if most of the capacities of the merging parties are committed under current state regulations to serve native load customers, a merger might have little effect on concentration and competition in wholesale electricity markets in the near term. In the longer term, however, when retail competition is introduced and native load obligations are relaxed in one or more states, the same merger might have a significant effect on concentration in wholesale electricity sales.

FERC may wish to examine two scenarios: (1) relevant suppliers constrained by obligations to serve present native load and (2) relevant suppliers unconstrained by such obligations. The former assumption often would describe competition over the near term, with no expiration of contracts and no retail (or other) deregulation. The latter assumption often would describe longer-run competition that might occur as contractual obligations expire or as retail competition is implemented by individual states. It may be appropriate to challenge the acquisition if threats to competition are found under either scenario.

(3) Transmission Pricing Regimes -- Transmission pricing regimes can strongly affect the scope of geographic markets. In addition, transmission pricing regimes may be subject to changes in regulation and in the scope and nature of regional transmission agreements. For these reasons, analyses of different scenarios can usefully identify to what degree merger evaluations depend upon the transmission pricing regime(s). Differences in transmission pricing regimes may affect suppliers' access to customers within the relevant geographic markets (due, for example, to the pancaking of transmission tariffs, the availability of discounted tariff rates, and the presence of tariff regimes such as Independent System Operators (ISOs)). FERC may wish to include in its analysis a separate scenario for each reasonably foreseeable and substantial change in transmission pricing regime.

(4) ISOs and Other Potential Mitigation Measures -- Analysis of alternative scenarios can provide a useful means of evaluating the likely effects of potential measures to mitigate market power. FERC may wish to use computer simulation modeling with alternative scenarios to evaluate the likely effects of ISOs, structural divestitures, and other potential mitigation measures. For example, a structural divestiture of generation capacity by applicants would most directly affect market concentration, and an ISO would most directly affect the transmission prices (or access) that potential suppliers must face.

## **VI. VERTICAL AND CONVERGENCE MERGERS**

*Just as vertical discrimination in transmission access and cross-subsidization concerns arise from the traditional vertical integration in the electric power industry, so too do these concerns arise from mergers that create vertical integration. Of particular interest are convergence mergers in which electric generating companies seek to acquire fuel suppliers that serve the acquiring firm's current or future competitors. In such cases, the concern arises that the acquirer will raise the costs of its competitors, thereby raising electricity prices, which will in turn increase the profits of the acquirer's generation assets. In the PacifiCorp/Peabody merger case, in which PacifiCorp sought to acquire*

*Peabody Coal Company, the FTC published an analysis of a proposed settlement that highlighted how these competitive concerns can fit into a particular fact situation.*(112) *The text in Sections A and B is adapted from the February 1998 Analysis of Proposed Consent Order to Aid Public Comment in that case.*

## **A. Raising Rivals' Costs**

Navajo Generating Station (Navajo) is a 2,250-megawatt coal-fired power plant located in the north-central section of Arizona. Navajo is supplied exclusively from Peabody's Kayenta mine via an 80-mile dedicated rail line. Mohave Generating Station (Mohave) is a 1,580- megawatt coal-fired power plant located in southern Nevada. Mohave is supplied exclusively from Peabody's Black Mesa Mine through a 275-mile coal slurry pipeline. Long-term contracts govern the terms on which Peabody supplies Navajo and Mohave.

Navajo and Mohave are absolutely dependent upon the Kayenta and Black Mesa coal mines for their fuel supply because of their extreme isolation relative to rail lines and other coal mines. There are no other economic sources of fuel, coal or otherwise, for these two large power plants.

PacifiCorp owns roughly 9,000 megawatts of generating capacity in the Western Systems Coordinating Council (WSCC), an organization of electric utilities and power marketers organized to improve the reliability of power transmission and delivery in the western United States and parts of southwestern Canada and northwestern Mexico. The WSCC represents a geographic market since transmission constraints severely limit imports. Sub-regions within the WSCC may also represent geographic markets, at certain times, given that the transmission capacity connecting subregions is limited and may be inadequate to balance supply and demand across the subregions.

A firm can sell its product at a higher price if its rivals charge higher prices. Thus, a firm can profitably increase its own price if it can take actions at low cost to itself that raise the costs, and subsequently the price, of its rivals. By vertically integrating with suppliers of a large share of some key input, a firm may be able to increase its rivals' costs. Given this, PacifiCorp's acquisition of Peabody, which is the exclusive supplier of coal to certain power plants that compete with PacifiCorp's own power plants, raises antitrust concern. Specifically, PacifiCorp would have an incentive to increase fuel costs at Navajo and Mohave in order to drive up the market price of electricity in the western United States. In the near term, PacifiCorp would be able to realize this higher price on its net wholesale electricity sales. In the long-term, assuming deregulation, PacifiCorp might also be able to realize this higher price on some of its retail electricity sales.

The extent of the anticompetitive harm caused by PacifiCorp's acquisition of Peabody depends on two factors: First, how much discretion does the mine owner have to affect the fuel costs at Navajo and Mohave given the long-term contracts between Peabody and the plant owners? Second, over what periods, if any, and to what extent will changing the costs of Navajo and Mohave affect the market price of electricity?

The long-term contracts that govern the supply of coal to Navajo and Mohave have a modified cost-plus format that makes them vulnerable to cost manipulation. A long history of cost disputes between the parties underlines the supplier's discretion to determine cost levels at the power plants. Consequently, post-merger, PacifiCorp could increase Navajo and Mohave's costs. Alternatively, an independent, profit-maximizing Peabody might find it in its interests to grant the power plants a discount on coal pricing. A merged PacifiCorp/Peabody, however, might decline to grant such discounts because increased output at Navajo and Mohave might decrease wholesale electricity prices in the WSCC and cause PacifiCorp/Peabody to earn less on its electricity sales. In this context, failure to grant a price concession amounts to a price increase.

Peabody documents reveal that price concessions in the near future for both Navajo and Mohave are a real possibility. Peabody documents show that the company has considered granting Navajo price discounts, because the plant has been underutilized during off-peak hours in the recent past. Moreover, Peabody documents also reveal that it expects the coming deregulation of the electricity industry will intensify competitive pressures on both coal-fired power plants and their coal suppliers. Peabody documents also reveal that Mohave will face a costly decision in the

next several years on whether to install scrubbers to comply with environmental regulations and will implicitly be looking to its coal supplier for cost relief.

PacifiCorp's roughly 9,000 megawatts of generating capacity, Navajo's 2,250 megawatts of generating capacity, and Mohave's 1,580 megawatts of generating capacity represent a comparatively small share of the 138,000 megawatts of generating capacity in the WSCC. In a market with numerous competitors such as electricity generation in the WSCC, one might assume if coal costs at two plants such as Navajo and Mohave were to increase and their generation consequently declined, other plants would simply increase output and there would be no effect on the market-clearing price. However, there is substantial evidence that manipulating fuel cost at Navajo could have a significant effect on the market price for wholesale electricity.

A Peabody document recognizes that if Navajo were to go to full capacity utilization during off-peak hours, it would produce 1,200 megawatts of additional power, depressing electricity prices. Also, computer modeling using programs well-accepted in the industry shows that manipulating prices at Navajo would have an effect on wholesale electricity prices in the WSCC.<sup>(113)</sup>

How can participation of suppliers comprising only a small fraction of capacity affect the market price for electric power? The answer lies in the way in which power plants are dispatched. Power plants tend to have very flat cost functions until they reach their capacity. Thus, power plants tend to operate at maximum capacity if they can economically do so at the prevailing price. Otherwise, they tend to be idled. Consequently, most of the power plants generating electricity, at any particular time period, have almost no ability to expand output and offset anticompetitive behavior. Given these circumstances, the power plants that could defeat anticompetitive behavior here would be those power plants with excess capacity that could produce and deliver to the areas served by Navajo and Mohave electricity at the same cost (or slightly above) Navajo's or Mohave's. The evidence indicates that there are no such power plants here.

During periods of low electricity demand in the WSCC (e.g., nighttime hours during the spring), electricity demand is met using some hydroelectric capacity, nuclear power plants, and some coal-fired power plants. Gas-fired power plants tend to be idled during these periods. Since coal-fired power plants are the last plants to be dispatched during these time periods, the market price of electricity during these periods is determined by the price at which the last-dispatched coal-fired power plant supplies electricity. Since periods of low electricity demand represent a substantial portion of the year and since fuel costs at Navajo and Mohave affect market price during these times, higher fuel prices at Navajo and Mohave can cause significant harm to consumers. Indeed, to give a rough sense of how this acquisition could increase concentration in markets for wholesale electricity during off-peak hours, a hypothetical merger of PacifiCorp's electric plants with Mohave and Navajo would make the market for coal-fired electricity in the WSCC highly concentrated and give PacifiCorp a 35% share, a level at which, under the Merger Guidelines, could lead to unilateral anticompetitive effects.

Cost manipulation at Navajo and Mohave could affect electricity prices in the WSCC not only during those off-peak hours when Navajo and Mohave are the marginal, price-setting plants, but also during a broader period of time. As noted above, power plants are dispatched in large part based on their variable cost, which in turn is largely determined by their fuel costs. This dispatch order can be thought of as a supply curve for electricity. Given this supply curve, if the fuel price at one power plant increases, then this power plant is removed from its current position in the supply curve and placed in a position further along the supply curve. This reorders the supply curve as higher priced plants are dispatched earlier along the affected section of the supply curve. This leads to higher prices every time electricity demand in a particular period intersects the affected section of the supply curve. Higher fuel prices at Navajo and Mohave could have a significant effect on price along a significant portion of the supply curve. If either plant were forced to close down, its removal would affect price at all points above the plant on the supply curve.

## **B. Abuse of Proprietary Information**

Power plant operators currently compete to supply electricity in informal wholesale markets characterized by bilateral contracts. In some states (e.g., California), power plant operators will soon compete in formal auctions to supply electricity. In all of these situations, power plant operators buy and sell both directly and through "power marketing" affiliates that have been expressly created to compete in the deregulating wholesale market for electric power.

Competition in the wholesale electricity market could be adversely affected by this acquisition throughout the United States because PacifiCorp may gain access, through Peabody's coal contracts and coal supply relationships, to highly sensitive data on competitors' costs and to real-time information relating to operating conditions of competing generators of electrical power.

A coal supplier is able to obtain competitively-sensitive information about the day-to-day operation of the power plant it supplies, including when the plant is experiencing downtime and when it is facing transmission bottlenecks. In addition, because coal costs comprise 90% of a coal-fired power plant's variable cost of generating electricity, a coal supplier will know cost information sufficient to predict the price the power plant will likely bid.

Peabody is a significant supplier of coal to coal-fired plants, supplying 27% of the coal that goes to such plants in the WSCC and 15% of the coal going to such plants in the United States. Many of Peabody's coal supply contracts have no protection against the transfer of such competitively-sensitive information, since they were executed prior to regulatory reform and before purchasers under these contracts had reason to be concerned about the competitive sensitivity of the information that could be revealed to competitors through such contracts or through the day-to-day relationship between the coal supplier and customer. Consequently, by acquiring Peabody, PacifiCorp will gain an invaluable window on real-time information relating to operating conditions and production plans at many of the approximately 150 power plants supplied by Peabody. By enabling PacifiCorp to predict supply shifts and consequent price movements in the market, this information gives PacifiCorp a significant competitive advantage in power marketing.

PacifiCorp will be able to trade on that information at the expense of other traders of wholesale electricity. Expected profits for both incumbents and prospective entrants will be lower if PacifiCorp possesses inside information regarding competitors' costs, supply conditions, and future operating plans. Consequently, as a result of PacifiCorp's perceived information advantage regarding electricity supply and costs, competitive entry in power marketing will be discouraged, and existing power marketing companies may defer greater investments in such enterprises and perhaps even exit, making the market for wholesale electricity operate less efficiently.

## **VII. PARTICULAR RETAIL COMPETITION ENTRY CONSIDERATIONS**

*During the FTC Electricity Public Workshop, presenters emphasized several recent developments in the electric power industry that may affect entry by electric power suppliers into retail electricity markets.<sup>(114)</sup> The first of these competition issues is supplier-of-last-resort or default service provision. This issue arises when some consumers intentionally or inadvertently fail to choose a new electric power supplier when retail competition begins. In such states, "default" customers are assigned to the generation or merchant affiliate of the existing distribution franchise holder (i.e., the incumbent utility). Other states have been concerned that assignment of default customers to the incumbent utility may preserve or enhance the incumbent's market power and be a barrier to entry for new electric power suppliers. These states have developed a system in which supply for this load is subject to competitive bidding among all potential market participants. In addition, other issues have arisen, such as whether the default supplier should provide power generated from the least expensive resources or should employ "green" resources.*

*Another competition issue identified by presenters is the price of default service. The default service price is often termed the "shopping credit" (or avoided cost) that consumers no longer owe the incumbent utility if they elect to seek an alternative electric power supplier. The shopping credit is usually equal to the unbundled rate for generation services plus costs for related billing and marketing services that the incumbent utility will no longer incur on behalf of the departing customer. The level of the shopping credit becomes complicated if the state has authorized the incumbent utility to recover stranded generation costs because all customers, regardless of whether they select a*

*new supplier, will be assessed stranded cost recovery charges.(115) If stranded cost recovery is authorized, the components of the incumbent's price for default service will include not only the shopping credit (i.e., the cost of producing the electricity and the avoided marketing costs described previously), but also recovery of stranded generation costs. The incumbent's price for default service, however, is unlikely to be greater than the unbundled price for generation services prior to retail competition. Thus, the higher the stranded cost recovery amount, the lower the shopping credit and vice versa.*

*Presenters at the Electricity Public Workshop noted that California and Pennsylvania, two of the "pioneer" states, have taken differing approaches to establishing and setting the level of shopping credits. In California, the shopping credit is small, and relatively few consumers have switched suppliers during the stranded cost recovery period. Participants emphasized, however, that consumers would soon discontinue paying stranded cost recovery charges (which were to be collected only for up to four years), which may increase the incentives to shop for alternative suppliers as the shopping credit increases. In Pennsylvania, a substantial portion of consumers have switched suppliers, particularly in the eastern part of the state where the shopping credit is relatively large. The trade-off, however, has been that the stranded cost recovery period in Pennsylvania will be relatively long (approximately 10 years), thus resulting in a lower yearly stranded cost assessment on consumers.*

*Default service and shopping credit policies both focus attention on contrasting policy goals in the transition to increased competition in the electric power industry. On the one hand, consumers are likely to obtain the benefits of competition sooner if entry takes place and additional, innovative competitors become quickly established. In the antitrust context, entry is considered effective if it is likely, timely, and sufficient. Quicker and more substantial entry is better for restraining anticompetitive price increases. Further, if entry is insubstantial, it may create a difficult and costly enforcement burden on regulators to constantly police discrimination and cross-subsidization by incumbents and assess the effectiveness of potential entry in constraining incumbents' prices and maintaining acceptable levels of service. On the other hand, entry may be slow and less substantial because the incumbent electricity suppliers already provide superior service at low rates. If policies that increase entry do so by handicapping incumbent firms, efficiencies of incumbents may be needlessly wasted and inefficient firms may enter. This may increase prices and diminish quality.*

*The issue of default service pricing is further complicated by the possible methodologies used to recover stranded costs. To avoid biasing the competitive process and discouraging entry, states may wish to avoid forms of stranded cost recovery that subsidize or penalize either incumbents or entrants. There are two principal concerns: (1) stranded cost recovery payments that give incumbents incentives to set artificially low energy charges that discourage entry, and (2) distortions in energy charges if stranded costs are collected as an excise tax on electricity use. The following excerpt addresses these two areas and is excerpted from the January 1999 FTC Staff Comment to the Alabama Public Service Commission.*

### **A. A Possible Unintended Consequence: Stranded Cost Recovery May Create Artificial Incentives to Deter Entry**

One potential unintended consequence of stranded cost recovery is that incumbent firms may be able to use the stranded cost recovery system to deter potentially more efficient and innovative entry(116) and thereby delay or harm competition.(117) If that occurred, electricity customers (municipalities, businesses, and consumers) would not only lose the benefits of price competition but also those flowing from the product and service improvements and increased product variety that competition brings. They would likely pay more than they otherwise would during the period after the stranded cost recovery period ended. [A state commission] could safeguard against these unintended consequences, however, by adopting, in conjunction with any stranded cost recovery system, one of three possible remedies discussed in Section C infra.

The harm to consumers would stem from the exclusion of efficient entrants during the stranded cost recovery period. The harm could result because of a connection between the way stranded costs are defined and a decision by state regulators to provide incumbent utilities with recovery of most or all of their stranded costs through surcharges on

electricity use.<sup>(118)</sup> Stranded costs are often defined by calculating the difference between the (larger) net present value of future income under traditional regulation using a rate-of-return concept and the (smaller) net present value of future income under regulatory reform. That is, the net present value of the income from a particular generation asset in a competitive environment is expected to be less than the income regulators would allow from a particular asset in a regulated environment.

When stranded costs are defined in this manner, the level of stranded cost recovery is inversely related to how far prices for electric power (energy charges) fall as the result of competition.<sup>(119)</sup> From the incumbent's perspective, there is an increase in revenue from stranded cost recovery for every revenue decline due to lower energy charges. With 100 percent stranded cost recovery, as some regulators have chosen, the offset is dollar-for-dollar. By contrast, the potential generation entrant has no stranded cost recovery revenue to offset lower energy charges. Thus, it could be disadvantaged by such a stranded cost recovery system because it may need to match the incumbent's lower energy charges in order to compete, but may lack the wherewithal to do so.

As competition in generation is about to begin, the vertically integrated incumbent must decide what price (energy charge) to set for the electricity it generates. If it establishes an artificially low energy charge,<sup>(120)</sup> entry would be less likely to take place and competition from entrants may be less likely to reduce the incumbent's future profits.<sup>(121)</sup> Stranded cost recovery revenue effectively could subsidize such artificially low energy charges, without proportionately reducing the total charges to consumers.

Customers that leave a vertically integrated incumbent and choose a new electricity supplier will typically be required to pay an energy charge, a lines charge, and a stranded cost recovery surcharge as part of their monthly electricity bill during the stranded cost recovery period.<sup>(122)</sup> Because many stranded cost recovery proposals incorporate an equalization-type formula such that stranded cost is defined as the remainder after subtracting energy and lines charges from the sum of the total charges projected under traditional rate-of-return regulation, a decrease in the energy charge prompts an offsetting increase in the stranded cost surcharge. In this circumstance, a decrease in energy charges may not be associated with any change in the total charges (price) for consumers and, thus, would be unlikely to result in increased output. Such a system also would provide less incentive for the incumbent firm to produce efficiently or to mitigate stranded costs.

Under this scenario, stranded cost recovery might become a license to block or eliminate entry, even if the entrants would be more efficient and innovative. As addressed in Section C *infra*, however, there are at least three alternative remedies that may be effective to prevent this from occurring, including a structural remedy.

## **B. Why Vertically Integrated Incumbents May Wish to Deter Entry**

From the incumbent firm's perspective, deterring entry may be attractive if delays in entry (1) increase costs for entrants, or (2) slow establishment of a competitive market. An incentive to deter entry may arise, for example, if the initial opening of competition by the state represents a unique window of opportunity for entrants to attract attention from potential customers at lower marketing costs than they otherwise would incur in a competitive market. In other words, the "kick-off" of retail competition is likely to be accompanied by publicity (news coverage) and government-authorized consumer education materials that are designed to raise consumer awareness of the opportunity to "shop" for power. Later entrants may face higher costs in establishing the same consumer awareness and interest in switching providers because their efforts will receive no spillover benefits from government-financed consumer information campaigns and publicity. In addition, a degree of consumer inertia may make consumers less amenable to "power shopping." If such is the case, the incumbent's ability to deter entry during this critical period of consumer interest and awareness may raise entrants' marketing costs above what they otherwise would be, over both the short and the long run.

A second incentive to deter entry may arise if there are lags in undertaking new generation and transmission investments that are needed to establish a competitive market. Delays in new investment sufficient to create a gap between the end of the stranded cost recovery period and establishment of a competitive market could stem from

matters such as higher marketing costs associated with inducing customers to switch before the new supplier is ready to start supplying the market.(123) By delaying entry, the incumbent firm might slow the development of a competitive market, and thus be able to exercise generation market power between the end of the stranded cost recovery period and the birth of the competitive market. If entry can be timed perfectly, however, the transition period may be brief,(124) and such competitive problems would not arise due to this incentive.

### **C. Possible Remedies to Prevent Consumer Harm If Stranded Cost Recovery Is Allowed**

If the stranded cost recovery mechanism allowed incumbent firms to act in the above-described manner, consumers could find total prices (including stranded cost recovery) to be no lower in the short run and higher in the long run. In addition, other benefits derived from early entry could be lost. . . .

[A state commission] may consider the following three policy alternatives to avoid this possible harm to consumers and competition if it determines that stranded cost recovery is appropriate.(125)

- 1) Require that incumbent, vertically integrated firms sell (divest) their generation capacity.(126) Vertical divestiture is likely to eliminate the incentive and ability to impose higher electricity prices after stranded costs are recovered, because the incumbent firms will not be selling electricity at that time. Although vertical divestiture could result in loss of economies of vertical integration, institutions such as an independent grid operator may preserve these economies if they precede or accompany divestiture. This structural remedy may be attractive because it changes the incentives of incumbent firms and should require no additional regulatory action.
- 2) Establish minimum energy charges for the incumbent utility that reflect at least its fuel costs. If the incumbent utility is required to set its energy charges at least at the variable costs of fuel, alternative suppliers with lower fuel costs may find sufficient incentives to enter. (127) The regulator's tasks of collecting data, monitoring compliance, and determining variable costs (assuming variable costs can even be determined) under this type of rule, however, would require significant resources. Although this approach may discourage entry-deterring prices, it also risks discouraging competitive price reductions aimed at, for example, promoting the sampling of new products, enhancing the demand for complementary products, or learning more about demand elasticity.
- 3) Establish caps on electricity prices during a transition period that extends for a fixed interval beyond the stranded cost recovery period. The price cap would reduce the ability of the incumbent utility to take advantage of the lack of entry during the recovery period by raising rates immediately thereafter. One drawback of this approach is that the long-term use of pricing caps may harm competition by muting important economic signals for additional transmission or generation capacity.

### **D. Potential Inefficiencies and Distortions from Stranded Cost and Benefit Recovery**

Different methods of recovering net stranded costs or net stranded benefits could have significantly different economic effects. The likely differences are explored in the public finance literature about different forms of taxation and subsidization. For example, a proposal to recover stranded costs through an additional charge on transmission services for departing customers is analogous to a sales or excise tax, with the charge paid varying in relation to the amount purchased in the future, thus possibly distorting future electricity consumption decisions.(128) Its effects can be contrasted with the effects of a lump sum, fixed charge based on past electricity use, which would not create the same possible distortions of future electricity consumption decisions.

## **VIII. CONSUMER PROTECTION**

*The FTC anticipates that, as electric power markets become competitive, the agency will focus closely on two areas of consumer protection. The first is the policing of electric service providers' advertising claims, particularly claims about the price and environmental attributes of the power being sold. The second is the policing of unfair or deceptive business practices related to supplying and billing for electricity services.*

*Section A discusses advertising claims in a deregulated electric power market and is adapted from the FTC's testimony in May 1999 before the Committee on Commerce, Subcommittee on Energy and Power, United States House of Representatives. Subsections 1 and 2 discuss two specific issues (advertising claims and substantiation) related to advertising claims. They are introduced separately, and each is excerpted from various FTC staff comments.*

*Section B discusses why uniform disclosure of terms, prices and relevant attributes of electric power will help ensure that consumers are able to make well-informed choices and thereby reap the benefits of competition. The text is excerpted from the May 2000 FTC Staff Comment to the West Virginia Public Service Commission.*

*Section C discusses types of unfair business practices that may be used in a competitive electric power market. The discussion also is adapted from the FTC's testimony in May 1999 before the Committee on Commerce, Subcommittee on Energy and Power, United States House of Representatives.*

## **A. Advertising Claims**

In a competitive retail electricity market, electricity service providers are likely to make a broad range of advertising claims, including claims about the nature of the service provided, the company selling the electricity, and the price for the service. We have already seen the use of environmental advertising in those states that have opened their markets to retail competition. Many consumers are interested in the environmental qualities of the electric power they buy, and some consumers are willing to pay a premium for "environmentally friendly" electric power. There is, however, a potential for abuse of environmental claims because of the premium price, and because consumers cannot verify any of these advertising claims themselves.

The types of environmental claims already appearing in electricity ads include:

- claims about the level of emissions of a product ("20% lower than average" or "doesn't pollute the air or water");
- the sources it is produced from ("nuclear free" or "all solar");
- overall effect on the environment ("help prevent global warming" or "reduce acid rain" or "green power");  
or
- the activities of the company selling it ("we support environmental organizations" or "10% of profits go to rainforest preservation").

All of the FTC's general principles about advertising will apply to these kinds of claims; that is, advertising claims must be truthful and they must be substantiated with appropriate evidence at the time they are made. Under FTC case law, deception occurs "if, first, there is a representation, omission, or practice that, second, is likely to mislead consumers acting reasonably under the circumstances, and third, the representation, omission, or practice is material."<sup>(129)</sup> It also is deceptive to omit "material information, the disclosure of which is necessary to prevent [a] claim, practice, or sale from being misleading."<sup>(130)</sup> Express claims, or deliberately made implied claims, used to induce the purchase of or payment for a particular product or service, are presumed to be material.<sup>(131)</sup>

The FTC, in enforcing the statutory prohibition on unfair or deceptive acts or practices, requires that advertisers possess a reasonable basis for all objective claims about their products, express or implied. What constitutes a reasonable basis can vary, depending on several factors: the type of product, the type of claim, the benefits if the



claim is true, the consequences if the claim is false, the ease and expense of developing substantiation, and the level of substantiation experts in the field would agree is reasonable.(132) Substantiation of claims about electricity sources or characteristics presents many challenges because new tracking systems must be developed, and they must provide a means of independent verification.

The FTC's Guides for the Use of Environmental Marketing Claims,(133) which were developed for environmental claims about any type of product, also will provide guidance to electricity marketers on acceptable advertising practices. In addition, the National Association of Attorneys General (NAAG) [adopted in December, 1999] similar green guidelines for electricity. The intent of [NAAG's Guidelines] is to assist states in their efforts to encourage fair competition and to provide some consistency in enforcing truth in advertising laws in the electric power industry. The FTC staff [was] involved in the process by submitting comments to NAAG and participating in their workshop[s].

## 1. Voluntary Advertising Claims

*The first stage in determining whether an advertisement is deceptive is to determine the claim being made. In the newly deregulated electricity markets, sellers often use vague terms such as "environmentally friendly" or "green," but the message that is conveyed to consumers will determine the substantiation needed by the seller. Besides messages about the power it is marketing, a seller also may send advertising messages about the company itself. An energy company affiliated with the distribution company may be able to obtain customers simply by virtue of its implied relationship with the parent company. But, as discussed in Chapter III, separation rules may be imposed on such affiliates in order to reduce discrimination or cross-subsidization and, depending on the extent of this separation, use of a parent's name or logo could be deceptive. The discussion of ad interpretation below is adapted from two staff comments (August 10, 1998 and August 12, 1999) filed with National Association of Attorneys General on its proposed Environmental Marketing Guidelines for Electricity. The discussion of affiliate use of parent name/logo is adapted from the September 1998 FTC Staff Comment to the Public Utilities Commission of Nevada regarding its proposal to allow such use subject to inclusion of a disclaimer.*

### a. Interpretation of Advertising Claims

General Environmental Benefit Claims Central to the issue of advertising for electricity is the question of what standards should guide the making of general claims of environmental benefit and, in particular, whether these claims should be avoided entirely or should be qualified. The FTC has taken the position in its Green Guides that claims of general environmental benefit should not be prohibited per se, but should be avoided or qualified as to a specific attribute, unless the marketer can substantiate all the implications of the broad claim. The staff sees no reason to treat general environmental claims for electricity differently.

Use of the Terms "Green" and "Clean" Two potential claims of general environmental benefit are "green" and "clean," and a number of questions have been raised concerning the meaning of these terms, including whether each term should be defined in the electricity context, whether these terms should be considered claims of general environmental benefit, and whether the use of these terms is inherently misleading.

The staff is not aware of any research into how consumers interpret the terms "green" and "clean" as they relate to electricity. Although there is little experience with the use of these terms in actual advertising contexts, it seems unlikely that "green" or "clean" claims are inherently misleading.(134) The term "green" in reference to a specific product (for example, "we make green electricity") may imply a claim of general environmental benefit, and should be treated the same as other claims of that type. Such claims may be made non-deceptively if appropriately qualified, for example, where an advertisement prominently explains the term's meaning ("go green by buying our power -- 20% lower emissions than coal-generated electricity"), assuming that the claim is substantiated.

It is less clear how consumers interpret the term "clean." The interpretation suggested by the Draft Guidelines, that "clean" refers to the absence of harmful emissions or pollutants, may well be supported by research into consumers' attitudes. It also is possible that consumers interpret the term "clean" to mean generally beneficial to the environment.

On net, it appears that applying a broad interpretation to the term "clean" could result in unnecessary limitations on advertising claims and could deprive consumers of a shorthand way of recognizing certain environmental information about electricity products. Given the use of the term "clean" in everyday speech and in other energy advertising contexts - such as the long-standing use of the phrase "clean natural gas" - it seems likely that consumers could interpret the term "clean" to refer only to emissions, rather than to other broad environmental qualities.

Defining minimum performance levels for use of the term "green" in relation to electricity, which the Draft Guidelines propose as an option, may be unnecessary or premature. For example, there is no obvious reason that consumers would interpret a "green" electricity claim differently than a "green" claim for any other product. Specifying a definition would entail speculation about how advertisers might use the word, as well as difficult value judgments about the use of the term in the context of various advertisements. Furthermore, because the term does not yet seem to have acquired a generally accepted meaning, different advertisers may wish to use the term in different contexts to mean varying things. There seems to be no reason to prohibit such variety, so long as no deception results.

Finally, creating a standard definition of the term "green" for all electricity advertisements could discourage companies who want to advertise better environmental performance or characteristics than the standards established by the guidelines. Companies would have little incentive to provide products that outperform the defined standard for the term "green" when sellers of products that do not perform as well can use the term just as easily. Such a disincentive seems contrary to the original impetus for deregulation, which included a desire to foster products that are better for the environment.

Because of the ambiguity of terms such as "green," and the uncertainty of how they will be used, the best approach for governing their use -- absent consumer research -- may be simply to rely on the approach taken for general environmental benefit claims in the FTC Green Guides. Under that approach, advertisers would be responsible both for determining what claims the terms they use convey, and for having substantiation for those claims. As with claims like "environmentally friendly," the likelihood is that interpretations of a term like "green" will be so broad that few unqualified claims could be made. If actual marketplace conditions proved otherwise, however, the guidelines should allow such claims.

**Renewable Energy Claims** Many of the same considerations discussed above for the terms "green" and "clean" also apply to the term "renewable." The meaning of this term is not clear on its face. It is reasonable to assume that consumers might interpret the term to refer to fuel sources, such as hydroelectric or biomass sources. Consumer interpretations and attitudes may vary regionally and may change over time.

The staff advises against assuming consumers would interpret the term "renewable" to be an overall general environmental benefit claim. Rather, the term should be treated in a manner similar to the FTC Green Guides' treatment of specific terms such as "biodegradable," "recycled," and "recyclable." The FTC Green Guides do not assume that such terms imply a general environmental benefit claim. For example, marketers who advertise a product as "recyclable" do not have to substantiate that no pollution results from the product's manufacturing process. Likewise, claims that an electricity product is produced from a "renewable" source should probably not be interpreted as a claim that the generation of this electricity produces no emissions. Otherwise, even specific claims would be practically impossible to substantiate, and, therefore, effectively banned from use.

Moreover, as the Draft Guidelines mention, California's restructuring legislation defines renewable sources to include small-scale but not large-scale hydroelectric power, and does not mention fuel cells. Massachusetts defines it to include any hydroelectric power, and also includes fuel cell technologies. Some federal laws and regulations mention neither hydroelectric nor fuel cell sources.<sup>(135)</sup> Therefore, defining the term "renewable" could create unneeded conflicts with varying laws and regulations governing its meaning.

## **b. Affiliate Use of Parent Name or Logo**

There is a justifiable concern regarding the effects on consumers and competition of unrestricted use by unregulated affiliates of the logo of the regulated distribution firm. Harm to consumers and competition may occur if elements of the reputation of the regulated firm are not applicable to the unregulated affiliate, but consumers believe that they are applicable when the unregulated affiliate uses the parent utility's logo.<sup>(136)</sup> For example, an element of a parent firm's reputation might be the credibility of its pledges of high-quality service that are backed by the parent's financial stability as a government-franchised monopoly. If a consumer imputed this same credibility to an affiliate's promises of high-quality service because of its use of the parent' logo, when in fact the affiliate did not have access to the revenues of the monopoly franchise, the consumer could be injured if the affiliate was unable to fulfill its promises in the way the consumer expected.<sup>(137)</sup> Under such circumstances, the use of the logo by the unregulated affiliate could harm consumers and harm competition in much the same way as deceptive advertising.

Thus, when considering the effect of an affiliate's use of the logo of the parent utility, the FTC would consider the impression consumers will have about the relationship between the utility and the affiliate and whether that impression would be likely to affect purchase decisions. If use of the utility's logo implies to consumers that the relationship between the utility and the affiliate is different from what it really is -- [regarding] an attribute that consumers care about -- such use of the logo could be considered deceptive.

## 2. Substantiation

*The Commission's substantiation doctrine requires that advertisers have a reasonable basis for any objective claim at the time the claim is made. In general, the necessary level of substantiation will depend on the type of product, the type of claim, the benefits if the claim is true, the consequences if the claim is false, and the ease and costs of developing substantiation for the claim. Substantiation of electricity claims may be problematic because electricity use generally cannot be directly tied to electricity production by any particular generator (i.e., most electricity customers do not have power lines connecting them exclusively to their power supplier).<sup>(138)</sup> Rather, customers receive electricity from power lines that are attached to a "grid" into which numerous generators, using a wide variety of fuel sources and generation systems, transmit their electricity. Once on the grid, all electricity is mixed together and its origins become indistinguishable. When a customer has a demand ("load") for electricity -- for example, to turn on lights -- the amount needed to meet the load is, in effect, drained off the grid. The electricity passing through the circuit nearest to that customer's line goes to the customer's meter and meets the load. The issues of how to track electricity and whether the tracking method should be disclosed to consumers are discussed below and are excerpted from staff comments (August 10, 1998 and August 12, 1999, respectively) filed with NAAG on its proposed Environmental Marketing Guidelines for Electricity.*

*Another issue in substantiation of claims is the variability of power production from particular sources and the fact that ad claims are made prior to actual production. A retailer with contractual rights to 10 MWH per month of wind power may receive only 9 MWH in a given month, due to wind conditions. This issue was discussed in the August 12, 1999 comment filed with NAAG on its proposed Environmental Marketing Guidelines for Electricity.*

### a. Tracking of Electricity

[I]t is impossible to claim that electricity used by a particular customer came directly and exclusively from that customer's supplier or to verify the precise sources of the electrons used by the customer. It is possible, however, to track the financial transactions that occur as power is supplied to the grid and then to the customer. A customer's usage is measured at the customer's meter. The customer is billed for that usage, and the proceeds go to the retail supplier. The supplier must in turn pay the middlemen who provided the power, and the middlemen must pay the generators whose power they bought to service the supplier. In this way, the customer's usage is linked, through the financial process, to identifiable generation plants and the characteristics (e.g., fuel type, emissions, etc.) associated with those plants.<sup>(139)</sup> Thus, it can reasonably be said that the customer's power purchase did result in electricity, possessing the characteristics advertised by the supplier, being generated and placed on the grid. . . .

The Draft Guidelines raise the issue of sellers' representations about the nature of electricity transmission and distribution from generator to customer over the power grid. As discussed above, it is impossible to determine whether electricity used by a particular customer came directly from that customer's supplier or to identify the precise sources of the electrons used by the customer. Therefore, misrepresenting the means of transmission or distribution of electricity to a consumer can simply be prohibited without the need for substantiation rules. Absent any claims about the transmission or distribution system, however, it should not generally be considered deceptive to make claims regarding fuel source, emission, or other environmental attributes. At the same time, affirmative disclosures that the consumer's home will not receive the electricity from the source(s) the seller advertises are probably not necessary to prevent deception.

## **b. Disclosures for Claims Substantiated Under a Tagging System**

The Draft Guidelines propose that any environmental claims that are substantiated through a "certificate-based" or "tradeable tags" tracking system should be "accompanied by a clear and prominent disclosure of the use of a tagging system to substantiate the claim."<sup>(140)</sup> The staff believes this requirement is not necessary to prevent deception, and will not aid consumers in making informed choices about their electricity purchases.

Certificate-based or tradeable tags is one of two methods that have been suggested for tracking electric power from generator to consumer to substantiate claims regarding the attributes of retail electricity. A "tagging" system involves the separation of power, which is a pure commodity, from its characteristics. Each unit of power generated is given a tag describing its characteristics, and the tag may be sold separately from the power itself. Under tagging, there are two separate markets operating at the wholesale level. A retailer (or upstream distributor) may buy power from the pool or from a particular generator and then buy "tags" from other generators which give the retailer the right to claim that the power it sells has the attributes associated with the tags that it holds. This allows for consumers to support environmentally preferred power through their power purchases, even when technological constraints on the grid would prevent the consumer from purchasing the green power from the generator that produced it. By contrast, the second method relies on a "contract path." Under this method, each unit of power, along with its attributes (fuel type, emissions, etc.), is accounted for in contractual arrangements between the generator and a wholesale buyer, between various distributors and retailers, and between the retailer and the consumer. The distinguishing characteristic of the contracts system is that power is sold together with its attributes.

Although tags may seem more complicated than contracts and may raise the suspicions of some consumers with only a cursory understanding of the tagging system, staff does not believe that the benefits to consumers of NAAG's proposed required disclosure of the use of a tagging system would outweigh its burdens. Research conducted by the National Council on Competition and the Electric Industry (NCCEI)<sup>(141)</sup> indicates that consumers have less confidence in environmental claims about power when they are told that a tagging system is used to support them. There is no reason, however, that a well-designed tagging system would be any less reliable for tracking electric power than a contracts system. Moreover, some believe it would be less expensive to operate. Both systems succeed in matching the premiums that consumers are willing to pay for green power to the generators who invest in and produce that power. Thus, for the purposes relevant to consumers, there is no difference between the methods.<sup>(142)</sup>

Furthermore, it is important to note that these tracking methods are systems of substantiating claims, and should not greatly affect the products or benefits that consumers are purchasing. The FTC does not generally require that substantiation methods be disclosed. Rather than require that consumers evaluate for themselves whether a test result was obtained based on sound scientific methods, the statutes, rules and guides that the FTC enforces seek to ensure that the substantiation is reasonable. For example, the FTC Green Guides allow for recycled content to be calculated on the basis of annual averages,<sup>(143)</sup> but disclosure of this fact to consumers is not required. Likewise, consumers do not generally know what test methods are used to calculate the nutritional content stated on food labels, but as long as the methods are reasonable and reliable, consumers are not misled or injured by such omissions. Moreover, it would be extremely difficult to craft a disclosure that would be easy to understand and not confusing. Accordingly, a disclosure might actually serve to increase consumer confusion, and could needlessly

undermine consumers' confidence in the new electricity market. For these reasons, the staff believes that requiring a disclosure for tags-based claims is not necessary to prevent consumers from being misled or to assist them in making informed choices about electricity.

### **c. Claimed Versus Actual Production**

Variations between claimed performance and actual performance may occur through no fault of the marketer, and in greater than de minimis amounts, for a variety of reasons. In addition, advertising claims for electricity products are necessarily made before the product is actually produced and before actual demand is known. Thus, it is not reasonable to expect electricity marketers to be able to match their advertising claims exactly all of the time, or even over a year's time. So long as the marketer had a reasonable basis supporting the claims at the time they were made, and the deviation is not material to consumers' expectations under the circumstances, numerical or percentage claims that constitute the reasonably expected amounts will convey useful information to consumers. A rigid standard defining as deceptive any failure to meet exactly the claimed production will reduce the incentives of marketers to make useful and informative claims regarding various types of power that they might provide to consumers.<sup>(144)</sup>

The degree to which a tolerance should be specified for the difference between predicted and actual production has mostly to do with the technological and meteorological constraints that are specific to the industry, and generally change over time. Because there has been little experience with competitive electricity marketing claims, using a fixed tolerance, such as 5% or 10%, would find little support from an analysis of the industry. Rather than setting a standard using a specific percentage allowance, it might be preferable to use a reasonableness standard in which deviations from the claimed production would be considered on a case-by-case basis.

Allowing a tolerance in reasonable amounts for unexpected and unintended deviations from advertising claims does not mean that marketers would be able to inflate numerical or percentage claims about the environmental characteristics of their products. That is, an electricity seller who can reasonably expect to supply 40% of demand from solar power could not advertise that their product is 50% solar simply because there is an allowance for reasonable deviances to account for unexpected, unintended events. Such an inflated claim would not be reasonably substantiated when made, and the subsequent deviation would not be due to unexpected events.

Unlike the certification organizations such as Green-e, neither the Attorneys General nor the FTC has the expertise or the resources to audit the portfolio of each electricity marketer each year. When an investigation is opened because of an apparent discrepancy, it may be that a marketer with huge differences between projected and actual portfolios actually has a justifiable reason, while another marketer might have very small differences that are not justified. Clearly, there would be no justification for persistent downward deviations year after year. But in a given year, the law enforcement agency would consider whether it was reasonable for the marketer to make the claim(s) that it did.

## **B. Uniform Labeling Requirements Are Likely to Assist Consumer Choice of Electric Power Suppliers**

In competitive electricity markets, consumers are likely to face a wide variety of price offers, contract terms, and environmental or service claims that may prove to be confusing, difficult to evaluate, or even misleading.

One approach to this problem is to standardize some of the information that suppliers disclose to consumers -- similar to what has been done with nutrition labeling on food, care labels on clothing, or energy efficiency labels on appliances. In fact, consumers in an electricity competition pilot project in New Hampshire noted the difficulty of comparing competing products when suppliers were allowed to present whatever information they chose about the product in any format they chose.<sup>(145)</sup> Standardized product labeling can alleviate this common consumer complaint by ensuring that consumers receive the relevant information they need to make an informed choice.

Various regulatory groups have recommended developing appropriate uniform disclosure requirements as a means to facilitate customer choice, provide consumer protections, and enhance market efficiency.<sup>(146)</sup> Laws or regulations

calling for some degree of mandatory uniform disclosures have been enacted in a number of states, including California, Connecticut, Illinois, Maine, Massachusetts, Michigan, Nevada, New Hampshire, Pennsylvania, and Vermont.(147) Other states are considering disclosure requirements as well. In addition, various bills introduced in the United States Congress propose federal disclosure requirements, including the bill supported by the Department of Energy.(148) Indeed, the FTC has noted that mandatory disclosures are "likely to help ensure that consumers receive, prior to purchase, accurate information important to their purchasing decisions," and that disclosures should be uniform to "reduce costs to market participants by enabling them to use one disclosure throughout the country."(149) Although existing laws and FTC rules prohibiting unfair or deceptive claims would govern electricity advertising, uniform disclosures would provide an important additional consumer benefit in a new market where consumers have had no prior experience with choice.

Uniform disclosure, however, raises many issues, including determining which types of information are important to consumers in choosing a supplier. Information that may be suitable for uniform disclosure includes price, price variability, environmental attributes of power supply (generation source and emissions characteristics),(150) and contract terms (minimum length, termination fees, transfer charges, etc.).

Another issue when mandating uniform disclosure rules is the format for disclosure of information. The chosen format should present information simply and clearly, and take a minimum of time to review and comprehend. A format that is overly restrictive, or that prohibits any additional claims elsewhere in the advertisement, may place unconventional or innovative products at a competitive disadvantage. California currently requires environmental disclosures using a standard label format, and the NECPUC Model Rule includes a sample label format.(151)

If disclosures are standardized, [a state commission] must confront whether they will be mandatory (required of all marketers regardless of claims made) or claims-based (required of marketers only when certain claims are made). One consumer study suggests that when standard disclosures are provided by all marketers, consumers are more likely (1) to think they had adequate information to make a choice, (2) to correctly identify the lowest priced product among several samples, and (3) to correctly identify the product with the least environmental impact among sample products.(152) If disclosures are mandatory, [a state commission] may wish to consider allowing suppliers to use a "default" label, and to determine the default label's content.(153) Another consideration is the placement of standardized disclosures -- that is, whether they must appear only in advertising that gives consumers the opportunity to select a competing supplier, or in all print advertising, or whether some alternative form of disclosures should appear in small-format print advertising and in non-print media.(154)

Each of these issues relating to label format and content raises cost concerns as well. Mandatory disclosure requirements will impose some level of costs on companies subject to them. The cost of tracking and maintaining the data necessary for the disclosure will vary depending on the type of information mandated and the degree of precision required for the information disclosed. It is likely that these costs, as well as the actual costs of making the disclosures, will be passed on to consumers. Therefore, the cost of requiring disclosures should be weighed against the benefit when deciding which items of information to include and what manner of disclosure to require.

### **C. Unfair or Deceptive Business Practices**

The second major area of consumer protection where the FTC expects to be active in a deregulated electricity market is in the policing of various unscrupulous business practices. Based on the deregulation of the telecommunications industry, we may see practices like "slamming" (changing a customer's electricity supplier without authorization) and "cramming" (placing unauthorized charges on a customer's bill) by dishonest electricity service providers as markets are deregulated. Indeed, the proposed Comprehensive Electricity Competition Act provides for the FTC to issue and enforce regulations to combat slamming and cramming in the sale of electric power.

The FTC has significant experience combating cramming on telephone bills, where unauthorized charges appear on a customer's bill, sometimes completely unrelated to phone service. Cramming was our fifth most common consumer

complaint [in 1999]. In addition, the Commission has been active in taking law enforcement actions targeting billing practices associated with cramming.

Several contributing factors lead us to believe that cramming also may become a problem in deregulated electricity markets. Billing formats used by electricity providers are often confusing, and there are many line item charges that consumers may have trouble identifying, making it more difficult for consumers to notice fraudulent charges. In competitive markets, the billing system will have to accommodate multiple vendors, some of whom may offer services unrelated to electricity. Moreover, billing may be handled by aggregators or service companies rather than the utility or service providers themselves.

The FTC also will be watching for other unscrupulous practices like pyramid schemes and other investment scams in this newly deregulated market. For example, the FTC [in 1998] settled charges with FutureNet, which was an alleged pyramid scheme. FutureNet was purporting to sell electricity service, even though at the time, no state had deregulated the sale of electric power to consumers.<sup>(155)</sup>

The Commission enforces other consumer protection rules that will apply to the sale of electricity in a competitive market. The Telemarketing Sales Rule, 16 C.F.R. Part 310, protects consumers from deceptive and abusive telemarketing practices. The Commission's Cooling Off Rule, 16 C.F.R. Part 429, applies to door-to-door sales and other sales made away from the seller's principal place of business. It requires that a seller in a door-to-door sale of consumer goods or services (with a purchase price of \$25 or more) furnish the buyer with certain oral and written disclosures of the right to cancel the contract with three business days from the date of the sales transaction. . . . Finally, the Commission enforces several statutes and implementing credit rules, such as the Truth in Lending Act (TILA),<sup>(156)</sup> and the Equal Credit Opportunity Act (ECOA).<sup>(157)</sup> These statutes may apply to the business practices of deregulated electric power marketers.

## **Appendix A**

### **List of Electric Power Related Advocacy Comments**

#### **Federal Energy Regulatory Commission Comments**

1. Docket No. RM99-2-000 (Aug. 16, 1999) (regional transmission organizations)
2. Docket EL99-57-000 (May 27, 1999) (Entergy transco proposal)
3. Docket RM98-4-000 (Sept. 11, 1998) (merger filing guidelines)
4. Docket No. PL98-5-000 (May 1, 1998) (ISO Policy)
5. Docket Nos. ER97-237-000 and ER97-1079-000 (Feb. 6, 1998) (New England ISO)
6. Docket No. RM96-6-000 (May 7, 1996) (merger policy)
7. Docket Nos. RM95-8-000 and RM94-7-001 (Aug. 7, 1995) (open access)

#### **State Comments**

1. Arkansas Public Service Commission, Docket No. 00-148-R (July 6, 2000) (standard service package)
2. West Virginia Public Service Commission, General Order No. 255 (May 19, 2000) (general restructuring)

3. Arkansas Public Service Commission, Docket No. 00-048-R (Apr. 13, 2000) (market power analysis)
4. Virginia State Corporation Commission, Case No. PUE990349 (Feb. 11, 2000) (regional transmission entities)
5. New Mexico Public Regulation Commission, Utility Case No. 3106 (Dec. 6, 1999) (affiliate codes of conduct)
6. National Association of Attorneys General (Aug. 12, 1999) (environmental marketing guidelines)
7. Public Utilities Commission of the State of California, Docket No. R.98-12-015 (Mar. 17, 1999) (distributed generation)
8. Alabama Public Service Commission, Docket No. 26427 (Jan. 11, 1999) (restructuring in general)
9. Louisiana Public Service Commission, Docket No. U-21453 (Oct. 30, 1998) (affiliate transactions)
10. Massachusetts Department of Telecommunications and Energy, DTE 97-96 (Oct. 8, 1998) (affiliate transactions)
11. Public Utility Commission of Nevada, PUCN Docket No. 97-5034 (Sept. 22, 1998) (affiliate transactions)
12. Louisiana Public Service Commission, Docket No. U-21453 (Sept. 4, 1998) (consumer issues)
13. Mississippi Public Service Commission, Docket No. 96-UA-389 (Aug. 28, 1998) (Transco proposal)
14. National Association of Attorneys General (Aug. 10, 1998) (environmental marketing guidelines)
15. Louisiana Public Service Commission, Docket No. U-21453 (Aug. 7, 1998) (stranded costs)
16. Michigan Public Service Commission, Case No. 11290 (Aug 7, 1998) (market power issues)
17. Utah Public Service Commission, Docket No. 96-999-001 (July 16, 1998) (consumer protection issues)
18. West Virginia Public Service Commission, Case No. 98-0452-E-GI (July 15, 1998) (electric restructuring)
19. Virginia Commonwealth of Virginia Joint Subcommittee, SJR-91 (July 9, 1998) (electric restructuring)
20. Texas Public Utility Commission, Project Number 17549 (June 19, 1998) (affiliate transactions)
21. Maine Department of the Attorney General and Public Utilities Commission, "Interim Report on Market Power in Electricity" (May 29, 1998) (entry conditions)

## **Endnotes:**

1. See Letter of the Federal Trade Commission to Thomas E. Bliley, Chairman, Committee on Commerce, on H.R. 2944, The Electricity Competition and Reliability Act (Jan. 14, 2000).

2. This foreword has been adapted from the Letter of the Federal Trade Commission to House Commerce Committee Chairman Thomas Bliley, Analysis of H.R. 2944 (Jan. 14, 2000) (Bliley Letter); Testimony of the Federal Trade Commission Before the Committee on the Judiciary, United States House of Representatives (July 28, 1999 and June 4, 1997); and the FTC staff comment to the Alabama Public Service Commission (Jan. 11, 1999).



3. Surveys of this literature include: Clifford Winston, U.S. Industry Adjustment to Economic Deregulation, J. Econ. Persp. (Summer 1998), and Economic Deregulation: Days of Reckoning for Micro-economists, 31 J. Econ. Lit. 1263 (Sept. 1993); John C. Hilke, Competition in Government-Financed Services (1992); Paul L. Joskow and Nancy L. Rose, The Effects of Economic Regulation, in Richard Schmalensee and Robert D. Willig (Eds.), Handbook of Industrial Organization, Vol. II (1989).
4. See R. Crandall and J. Ellig, Economic Deregulation and Customer Choice: Lessons for the Electric Industry 2-3 (1996) (within 10 years of substantial deregulation, prices in the natural gas, long distance telecommunications, airlines, trucking, and railroad industries decreased between 25 and 50 percent while quality of service improved).
5. Federal Trade Commission, "Analysis of Proposed Consent Order to Aid Public Comment in In the Matter of PacifiCorp et al.," FTC File No. 971-0091, at 4 (Feb. 18, 1998) <[www.ftc.gov/os/9802/index.htm](http://www.ftc.gov/os/9802/index.htm)>. The FTC withdrew from the proposed consent order as of June 30, 1998 because PacifiCorp withdrew from the merger <[www.ftc.gov/opa/9807/petapp39.98.htm](http://www.ftc.gov/opa/9807/petapp39.98.htm)>. The PacifiCorp/ Peabody case is discussed further in Chapter VI.
6. See, e.g., Federal Trade Commission, "Analysis of Agreement Containing Consent Orders To Aid Public Comment in In the Matter of Dominion Resources, Inc. and Consolidated Natural Gas Company," FTC File No. 991 0244 (Nov. 8, 1999) <<http://www.ftc.gov/os/1999/9911/dominionana.htm>>.
7. The federal antitrust authorities (FTC and DOJ), state public service commissions, and FERC all potentially have authority to review electric power industry mergers. (The Securities and Exchange Commission (SEC) and Nuclear Regulatory Commission (NRC) also have statutory authority to review antitrust implications of a proposed electric power utility merger in certain circumstances.)
8. A list of staff comments on electricity matters appears as Appendix A.
9. Generation is by far the largest component of the industry in terms of investment and revenues. Distribution is the next largest component, and transmission is the smallest component.
10. "Reliability" is an attribute of electric service often measured in terms of disruptions of service and voltage consistency.
11. Contract Path -- the transmission path that is assumed in traditional transmission regulation and inter-utility agreements.
12. Loop Flow -- terminology indicating that electricity does not follow the traditional contract path, but rather flows over several different transmission paths in an inverse relationship to electrical resistance in each line.
13. There are three areas of synchronized generation in the contiguous states: Texas, the western states, and the remainder of the country.
14. Scale economies exist when average costs of production fall as the level of output rises. Economies of vertical integration exist when average costs are lower when two or more stages of production are managed jointly. A natural monopoly exists when average costs are minimized with only one supplier (assuming the monopolist produces efficiently).
15. The Federal Energy Regulatory Commission (FERC) recently promulgated regulations encouraging the voluntary formation of RTOs across the country. FERC Order No. 2000, Regional Transmission Organizations (Dec. 17, 1999). RTOs operate and control a regional transmission system by implementing economic dispatch and reliability controls.
16. The list of publicly owned power providers includes several major federal agencies such as the Tennessee Valley Authority and the Bonneville Power Administration. There are also thousands of local municipal power suppliers and

electric cooperatives, many of which provide only distribution services. Although most of the municipal utilities and cooperatives serve small towns or rural areas, some supply large urban centers. The largest of these serves the Los Angeles area. Some states, New York, for example, also own generation facilities.

17. The California PUC's 1994 "Proposed Policy Decision Adopting a Preferred Industry Structure" (California PUC Docket No. R.94-04-031 and I.94-04-032) was developed in large part with reference to the U.K.'s regulatory reforms. See Kenneth W. Costello and Robert J. Graniere, *The Outlook for a Restructured U.S. Electric Industry: Lessons from Deregulation*, 10 *Elect. J.* 81-91 (May 1997) for a more recent review of the implications for the U.S. of reforms in the U.K.'s electric power and gas industries.

18. Gridco - a private, for-profit independent system operator that owns the transmission lines in its region.

19. Retail Wheeling -- policy allowing businesses and consumers to purchase electricity from generators or power merchants other than the vertically integrated utility that had been assigned as the regulated monopoly for the service territory in which the customer is located. The last stage of retail competition in the U.K., individual households, began in 1998. International Energy Agency, *Energy Policies of IEA Countries, Section II (United Kingdom)* (1998) <<http://www.iea.org/pubs/reviews/files/enpol98/05e-rv98.htm>>.

20. Regulatory reforms in the electric power industry in New Zealand, Norway, and Chile have also been viewed as successful. The International Energy Agency's review of New Zealand reported increased efficiency, lower costs, and enhanced consumer choice and service as a result of reforms. In 1998, the government announced plans to move forward with splitting up the predominant government-owned generating entity to increase generation competition. International Energy Agency, *Energy Policies of IEA Countries, Section II (New Zealand)* (1998) <<http://www.iea.org/pubs/reviews/files/enpol98/07b-rv98.htm>>. Significant gains in operating efficiencies have occurred in Argentina due to regulatory reforms in the electric power industry. Omar Chisari, Antonio Estache, and Carlos Romero, *The Distribution of Gains from Utility Privatization and Regulation in Argentina*, 12 *Public Policy for the Private Sector* 33 (Dec. 1997).

21. The U.K. restructured its electrical system in March 1990. See Richard J. Green and David M. Newberry, *Competition in the British Electricity Spot Market*, 100 *J. Pol. Econ.* 929 (1992), Catherine D. Wolfram, *Measuring Duopoly Power in the British Electricity Spot Market*, 89 *Am. Econ. R.* 805 (1999) for a discussion of the extensive data and detailed statistical analyses used to establish the nature and extent of market power in the U.K.'s system. In July 1993, the U.K.'s Director General of Electricity Supply indicated that the extent of competition was not sufficient to restrain the exercise of market power by the two dominant generators. See Statement of the Director General of Electricity Supply, "Proposed Acquisition by Eastern Group PLC of 4,000 MW of Plant from National Power PLC," at 2 (May 9, 1996). More generally, see David M. Newberry and Michael G. Pollitt, *The Restructuring and Privatization of the U.K. Electricity Supply -- Was It Worth It?*, 11 *Public Policy for the Private Sector* 7 (Sept. 1997). The price caps, which were designed to address generation market power by placing an upper limit on the U.K.'s electricity rates, also became controversial. Cost decreases associated with regulatory reform were large. In the presence of price caps, lower costs resulted in dramatically increased profits for incumbent generating firms. The government eventually imposed a windfall profits tax on these gains. Paul Kemezis, *Diversify or Die? Recent History Has Proved Otherwise*, 212 *Electrical World* 50 (Nov. 1998.)

22. Letter of the Federal Trade Commission to House Commerce Committee Chairman Thomas Bliley, *Analysis of H.R. 2944* at 4-5 (Jan. 14, 2000).

23. See Timothy Brennan, *Why Regulated Firms Should Be Kept Out of Unregulated Markets: Understanding the Divestiture in United States v. AT&T*, 32 *Antitrust Bull.* 741 (1987), and *Cross Subsidization and Cost Misallocation by Regulated Monopolists*, 2 *J. Reg. Econ.* 37 (1990).

24. See, e.g., "Petition for a Rulemaking on Electric Power Industry Structure and Commercial Practices and Motion to Clarify and Reconsider Certain Open-Access Commercial Practices," filed with FERC by Altra Energy Technologies, Inc. and others on March 25, 1998.

25. *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973).

26. The concerns expressed in the NEPOOL Comment were generalized in the FTC staff comment to FERC on policies concerning formation of ISOs (May 1, 1998).

27. (Footnote omitted)

28. Under traditional FERC transmission tariffs, an additional charge is incurred any time the contract transmission path involves more than one firm's transmission system, thus causing rates to be "pancaked."

29. A "load pocket" refers to demand in an area that must be satisfied by generation in that area because transmission congestion prevents utilization of supplies from outside the area.

30. One potential difficulty with the nonprofit status of ISOs is the lack of profit incentives to operate efficiently and to make economically appropriate investment decisions regarding expansion of the transmission grid to address transmission bottlenecks. ISO governing bodies may be able to design the employment contracts of ISO managers to provide such incentives.

31. Additional guidelines on formation of ISOs have been issued by FERC in Order No. 888, F.E.R.C. Stats. & Regs. (CCH) ¶31,036 (Apr. 24, 1996) (Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities), and Order No. 889, F.E.R.C. Stats. & Regs. (CCH) ¶31,594 (Apr. 24, 1996) (Open Access Same-Time Information System and Standards of Conduct).

32. U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, issued April 2, 1992, revised April 8, 1997.

33. In order to provide an effective constraint on the exercise of market power in the short-run, entry must meet all three criteria. Entry is considered timely if it can be achieved within two years (DOJ/FTC Merger Guidelines, Section 3.2). Entry is considered likely if it would be profitable at premerger prices, and if such price could be secured by the entrant (id., Section 3.3). Entry in a geographically differentiated market is considered sufficient if the character (location) and scope of the entrant's products are responsive to the localized sales opportunities that include the output reduction associated with the competitive effect of concern (id., Section 3.4).

34. See Paul L. Joskow, *Restructuring, Competition and Regulatory Reform in the U.S. Electricity Sector*, 11 *J. Econ. Pers.* 119-38 (1997); Federal Trade Commission, "Analysis of Proposed Consent Order to Aid Public Comment in In the Matter of PacifiCorp et al.," FTC File No. 971-0091, February 18, 1998. Note that because electricity cannot be stored, suppliers may include in the rate base a wide spectrum of costs ranging from low-marginal-cost base load plants to high-marginal-cost peaking capacity.

35. See, e.g., Scott M. Harvey, William W. Hogan, Susan L. Pope, *Transmission Capacity Reservations Implemented through a Spot Market with Transmission Congestion Contracts*, 9 *Elect. J.* 42-55 (1996), and *Transmission Capacity Reservations and Transmission Congestion Contracts* (1996) (unpublished manuscript); William W. Hogan, *Contract Networks for Electric Power Transmission*, 4 *J. Reg. Econ.* 211-42 (1992); Paul L. Joskow, *Restructuring, Competition and Regulatory Reform in the U.S. Electricity Sector*, 11 *J. Econ. Pers.* 119-38 (1997); Hon. William L. Massey, *Transmission Pricing Reform: FERC's Next Frontier?*, 10 *Elect. J.* 14-20 (1997).

36. Computer capabilities now allow calculations of transmission congestion effects on a much more detailed level. Such improvements permit transmission pricing to move away from the historical contract path approach, which does not account for loop flows and causes suboptimal utilization of the transmission grid. Paul L. Joskow, *Restructuring, Competition and Regulatory Reform in the U.S. Electricity Sector*, 11 *J. Econ. Pers.* 119-38 (1997).
37. Martha S. Linet, Elizabeth Hatch, Ruth Kleinerman, et al., *Residential Exposure to Magnetic Fields and Acute Lymphoblastic Leukemia in Children*, 337 *N. Eng. J. Med.* 3-14 (1997). This National Cancer Institute study does not "support the theory that residential magnetic fields cause childhood leukemia, particularly at the levels found in most homes." The NCI study was done with the aim of overcoming some of the problems of earlier studies and providing more definitive answers. *Some Questions and Answers about the National Cancer Institute/Children's Cancer Group Study of Magnetic Fields and Childhood Leukemia* <[rex.nci.nih.gov/INTRFCE\\_GIFS/MASSMED\\_INTR\\_DOC.htm](http://rex.nci.nih.gov/INTRFCE_GIFS/MASSMED_INTR_DOC.htm)> (downloaded Apr. 21, 1998).
38. FERC's Inquiry Concerning the Commission's Policy on the Use of Computer Models in Merger Analysis; Notice of Request for Written Comments and Intent to Convene a Technical Conference, 63 *Fed. Reg.* 20,392 (1998) ("The purpose of this inquiry is to gain further input and insight into whether and how computer models should be used in the analysis of mergers ...").
39. Federal Trade Commission, "Analysis of Proposed Consent Order to Aid Public Comment In the Matter of PacifiCorp et al.," FTC File No. 971-0091, at 4 (Feb. 18, 1998). The FTC withdrew from the proposed consent order as of June 30, 1998 because PacifiCorp withdrew from the merger <[www.ftc.gov/opa/9807/petapp39.98.htm](http://www.ftc.gov/opa/9807/petapp39.98.htm)>.
40. FERC Order No. 2000, *Regional Transmission Organizations* at 35, 70 (Dec. 17, 1999).
41. See, e.g., Testimony during Panel III: How Does Wholesale Competition for Generation Affect Retail Electricity Competition?, Transcript of Federal Trade Commission Public Workshop: Market Power and Consumer Protection Issues Involved with Encouraging Competition in the U.S. Electric Industry (Sept. 13, 1999).
42. The discussion in Chapter II.C, *supra*, regarding the benefits of independent system operators (ISOs), which are a type of RTO, to address market power in generation also is applicable in light of an RTO's or ISO's ability to address transmission discrimination as well.
43. See Timothy Brennan, *Why Regulated Firms Should Be Kept Out of Unregulated Markets: Understanding the Divestiture in United States v. AT&T*, 32 *Antitrust Bulletin* 741 (1987), and *Cross Subsidization and Cost Misallocation by Regulated Monopolists*, 2 *J. Reg. Econ.* 37 (1990).
44. Timothy Brennan, *Cross Subsidization and Cost Misallocation by Regulated Monopolists*, 2 *J. Reg. Econ.* 37 (1990); see also Timothy Brennan and Karen Palmer, *Comparing the Costs and Benefits of Diversification by Regulated Firms*, 6 *J. Reg. Econ.* 115 (1994). The monopolist's entry could also be beneficial if the unregulated market is uncompetitive and entry by the monopolist could improve competitive conditions there, net of the distortions its entry could introduce.
45. The costs and benefits of vertical integration are traditionally treated as part of the corporate make or buy tradeoff where benefits include the realization of scope economies. For a general treatment of integration considerations, see Oliver Williamson, *Markets and Hierarchies* (1975).
46. South Carolina Comment (February 1994) at Appendix B. The operational unbundling concept has been incorporated into electricity reforms abroad and is the centerpiece of the recent proposal by the California Public Utility Commission. Both the United Kingdom and New Zealand have established independently operated grid operators. In New Zealand, generation firms and the local distribution companies share ownership interest in the grid operator. In California, the PUC majority has proposed that transmission lines would continue to be owned by the franchised utilities, but the utilities would grant full operational control to an independent system operator.

In our view the most effective step which we can promote to resolve the vertical market power issues focuses on the operation of the transmission assets which are currently owned by utilities in California. While some have called for the utilities to divest themselves of ownership, we have concluded that our objectives can likely be met by a less drastic alternative. We propose that ... all participants in the pool transfer the operational control of all transmission assets to an independent system operator.

California Public Utilities Commission, Proposed Policy Decision, Dkts. R.94-04-031 and I.94-04-032 (May 24, 1995), Section I.D.a. See also William Hogan, *Electricity Transmission and Emerging Competition* (1995).

47. Separate operation could facilitate more effective direct regulation of transmission, such as through rate caps tied to inflation and adjusted to account for anticipated technological improvements. And control over transmission might be assigned to a body that includes parties, such as local distribution company customers, with an interest in resisting transmission market power. See South Carolina Comment (February 28, 1994) Appendix B. Operational unbundling, by stimulating cost reductions, might also improve productive efficiency.

48. The countervailing concerns, about new forms or opportunities for discrimination or cross subsidization and loss of economies of scope, may also be moderated by innovative pricing regulations. For example, price caps may curtail cross subsidization opportunities as well as limit market power. Ronald Braeutigam and John Panzar, *Diversification Incentives Under "Price Based" and "Cost Based" Regulation*, 20 RAND J. Econ. 373 (1989).

49. In the natural gas industry, FERC has considered similar problems of assessing the costs and benefits of requiring complete corporate separation. For example, FERC considered whether natural gas pipelines should be permitted to operate marketing subsidiaries. The staff of the FTC, in its comment on that issue, suggested that FERC experiment with measures short of formal separation or prohibition, such as permitting pipelines to own marketing affiliates but prohibiting an affiliate from entering transactions with its affiliated pipeline. FTC staff comment to FERC on marketing affiliates, Doc. RM87-5-000 (1987).

50. Illustrative figures developed by Oak Ridge National Laboratory show that a 765 kV transmission line costs at least 30 percent less than a 500 kV line and at least 85 percent less than a 138 kV line, on a cost per MW-mile basis. FERC Transmission Task Force, Staff Report, 215-16 (1989).

51. For a further discussion of this type of concern, see Scott Harvey and William Hogan, "Comments on the California ISO's NewGen Policy" (Aug. 1999).

52. Notice at 124-25. See FTC Staff Entergy Services Comment (May 27, 1999); FTC Staff Comment to the Mississippi Public Service Commission (August 28, 1998). Concerns about the effectiveness of safeguards against discrimination in access to transmission may be particularly acute where transmission owners have great discretion in reducing ATC (available transmission capacity) to independent generation entities by claiming that transmission capacity is necessary to meet native load obligations.

53. Notice at 125-26.

54. In addition, FERC also may want to consider applying whatever ownership rules it develops to third parties that have a substantial interest in a generation owner. This concept is analogous to the "ultimate parent entity" concept embodied in the FTC's rules governing the submission of Hart-Scott-Rodino premerger notification filings. 16 C.F.R. Part 801.

55. 15 U.S.C. § 19.

56. The statute provides an exception when there is a de minimis overlap of competing products and services between the firms.

57. As a remedy for an anticompetitive merger, the FTC sometimes requires parties to divest competitively overlapping assets or divisions to an existing or newly-created entity. Many of the considerations mentioned above are examined to determine whether the acquiring entity will operate those assets or divisions competitively and independently of the merged firm.

58. If FERC elects to allow generators to have a voting interest, it may wish to consider establishing a cap on the aggregate voting interest of generators and a prohibition on voting pools of generators.

59. For example, cases have been brought charging firm A with inducing firm B to discriminate against a firm that competes with firm A. See, e.g., *Monsanto Co. v. Spray-Rite Service Corp*, 465 U.S. 574 (1984) (a challenge to a manufacturer's termination of a discounting distributor initiated by requests of rival distributors); and the FTC's recent matter *Toys "R" Us, Inc.*, Dkt. No. 9278 (1998) (respondent pressured manufacturers to limit supplies to growing competitors) (appealed to the U.S. Court of Appeals for the Seventh Circuit). Another source of concern occurs if a powerful member of an industry association has the capacity to use the association as an instrument to injure competition or promote collusion. Recognizing these dangers, the Supreme Court held in *Allied Tube & Conduit Corporation v. Indian Head, Inc.*, 486 U.S. 492 (1988), that manipulating an industry association's standard-setting process was subject to antitrust challenge, even though no association rules were violated. According to the Court, "the hope of procompetitive benefits [from the standard-setting process] depends upon the existence of safeguards sufficient to prevent the standard-setting process from being biased by members with economic interests in restraining competition." *Id.* at 509. Since, absent appropriate safeguards, comparable manipulation of an RTO's independent decision making process may be possible, FERC may wish to consider requiring that RTOs and market participants adopt internal procedures to prevent the exercise of inappropriate influence.

60. "Competition by Utilities in Energy Conservation and Home Appliance Markets,"

Statement of Timothy J. Muris, Director of the FTC Bureau of Competition, Senate Committee on Small Business (Nov. 3, 1983).

61. See, e.g., Testimony during Panel IV: Affiliate Rules and Codes of Conduct, Transcript of Federal Trade Commission Public Workshop: Market Power and Consumer Protection Issues Involved with Encouraging Competition in the U.S. Electric Industry (Sept. 14, 1999).

62. *Id.*, Testimony of Commissioner Judy M. Sheldrew, Public Utility Commission of Nevada (Sept. 14, 1999).

63. See John E. Kwoka, Jr., *Power Structure: Ownership, Integration, and Competition in the U.S. Electricity Industry* (1996).

64. U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, issued April 2, 1992, revised April 8, 1997 (*Horizontal Merger Guidelines*) <<http://www.ftc.gov/bc/guidelin.shtm>>. The efficiencies section (Section IV) was revised and adopted in 1997 based, in part, on hearings on changing technology and trade conditions conducted by the Federal Trade Commission in 1996. In addition, the *Horizontal Merger Guidelines* also were adopted as the framework for antitrust analysis by the Federal Energy Regulatory Commission in 1996.

65. *Id.* at Section IV. In addition, the FTC and the Department of Justice recently have released a draft of proposed "Antitrust Guidelines for Collaborations Among Competitors" that adopt the same efficiency analysis for collaborations among competitors. Federal Trade Commission and U.S. Department of Justice, "Antitrust Guidelines for Collaborations Among Competitors" released Oct. 1, 1999 (Section 3.36) <<http://www.ftc.gov/os/1999/9910/jointventureguidelines.htm>>.

66. For example, section 11.2.3 of the proposed code of conduct prohibits a public utility and an affiliate from sharing facilities, goods and services such as telecommunications and computer systems.

67. Much of this evidence is reviewed in the Notice of Public Rulemaking on Regional Transmission Organizations issued by the Federal Energy Regulatory Commission in Docket RM99-2-000 on May 13, 1999.

68. Substantiality may refer to the magnitude, duration, or operational significance of the transaction, or a combination of these and other factors.

69. Although the discussion has been developed in the context of proposed rather than existing transactions, the same framework of analysis can be applied in instances where a transaction is already taking place between a regulated utility and its unregulated affiliate. Note that where this analysis results in the termination of an existing transaction with the unregulated affiliate, efficiencies that are not specific to the transaction are unlikely to be lost to the regulated utility or to society because these efficiencies can be regained through alternative transactions with unaffiliated firms that are less threatening to competition.

70. For example, Phoenix, Arizona has implemented a system of competitive bidding in which outside contractors compete against government departments for contracts to provide various city services. Before a city agency can submit a bid, however, the Office of the Comptroller, which is an independent entity, must certify that the bid is realistic. John C. Hilke, *Competition in Government-Financed Services* 16, 67-68 (1992). The city continues to save substantially through this bidding process. (Communication with Lera Riley, Assistant Public Works Director, City of Phoenix, Oct. 1998.)

71. For example, Public Utilities Commission on Nevada, "Proposed Regulations Governing Affiliates of Distribution Companies," Sec. 22 (Sept. 1998).

72. Edison Electric Institute, 4 Retail Wheeling & Restructuring Report 65 (March 1998).

73. Initial evidence from the Pennsylvania retail competition experiment suggest that consumers may rely on the use of the logo to select an electricity provider. Customers reportedly disproportionately favored an affiliate that used the logo of its parent distribution utility relative to an affiliate of the same parent firm that did not use the logo. *Energy Daily* (June 23, 1998).

74. The incremental (marginal) cost of marketing to additional customers is likely to be lower if consumers are already familiar with the logo employed in the marketing effort, since little effort will be required to establish familiarity.

75. If the competing firms do not respond with lower prices, the affiliate likely will gain market share. If so, the average price in the market will be lower, even if competitors do not reduce their prices when the affiliate lowers prices, because of its lower marginal costs.

76. Consumers could view use of the parent utility's logo as a guarantee that the affiliate firm is not a fraudulent operator.

77. Transfer pricing rules typically forbid transactions between an unregulated affiliate and its regulated parent utility at prices that fall outside of specified limits. Commonly used boundaries include market prices, embedded costs, and book value.

78. If entry is difficult or delayed, market share gained through cross-subsidization also may have persistent effects even after the cross-subsidization has been discontinued.

79. Although use of a disclaimer may be a remedy worth considering, it may be difficult to develop disclaimers that are simultaneously sufficient to avoid deception and succinct enough to make affiliate use of the regulated parent utility's logo practical.

80. Private parties may submit such evidence from privately funded research. [A state commission], however, should be wary of testing performed on behalf of special interests, and should take steps to ensure that the results represent useful indications of likely consumer impressions and behavior.

81. Payments to the regulated distribution firm for use of its logo could reduce prices for distribution services by substituting for revenues what the firm otherwise would be authorized by [a state commission] to collect through distribution charges.

82. In some situations, firms may sell the right to use a logo to independent entities, contingent upon conditions and restrictions placed on use of the logo.

83. The Maine Public Utilities Commission has established rules requiring affiliates to pay the incumbent utility for use of the goodwill reflected in the utility's name. The payment is determined according to how soon the utility succeeds in earning its authorized return on equity. Maine Public Utilities Commission, Docket No. 98-077 (July 7, 1998). The rules provide a three-year initial payment period followed by a reassessment with an additional three years of payments if necessary to bring down the value of the goodwill asset to zero. Corporate Goodwill, Public Utilities Fortnightly 16 (Oct. 15, 1998).

84. See, e.g., *FTC v. Cardinal Health*, *FTC v. McKesson Corp.*, Civil Action Nos. 98-595 and 98-596, slip op. at 62 (D.D.C. July 31, 1998) (noting that "[t]he FTC at trial showed, through Defendants' own internal documents and public statements, that they perceived that the excess capacity currently in the marketplace was the primary factor fueling so-called 'irrational' pricing").

85. Notice, 63 Fed. Reg. at 20344.

86. Horizontal Merger Guidelines, Sections 1.11 and 1.21.

87. If a monopoly price is used as the starting point for the "small but significant and nontransitory" increase by the hypothetical monopolist, the market is likely to be drawn broadly and, as a result, mergers that would reinforce pre-merger market power may be permitted.

88. Notice, 63 Fed. Reg. at 20347.

89. Batteries allow some storage of electrical energy. Other technologies, such as air conditioning systems that cool water in off-peak demand periods to use for cooling during peak demand periods, also can provide limited opportunities to store electricity. To date, these storage methods are of relatively minor significance in most areas.

90. While geographic and product market analysis is typically conducted under the Horizontal Merger Guidelines using a hypothetical five percent price increase, this analytical convenience does not indicate a "tolerance level" (Horizontal Merger Guidelines, Section 1.0) for merger-related price increases that are smaller, but more likely. At the same time, de minimis increases in market power for short, nonrecurring periods may receive less attention from antitrust agencies when the costs and benefits of enforcement are weighed.

91. Transmission constraints in one area may have widespread effects due to loop flows: the actual flows of electrical current follow the paths of least electrical resistance, not the contract path that may be specified in an electric power transmission transaction.

92. Reduced reserve requirements may allow the merged parties to cease using some generating facilities with higher marginal costs for reserves. This will reduce the marginal costs of reserves, which in turn is likely to provide profit incentives for the combined firm to reduce prices.



93. Horizontal Merger Guidelines, Section 4, note 36. Efficiencies in different markets are inextricably linked if "a partial divestiture or other remedy could not feasibly eliminate the anticompetitive effect in the relevant market without sacrificing the efficiencies in the other market(s)."

94. Notice, 63 Fed. Reg. at 20348-50.

95. See "FTC to Challenge Questar Acquisition of Kern River, Alleging Monopoly over Natural Gas Transmission into Salt Lake City Area," FTC News, Federal Trade Commission, Dec. 27, 1995. The parties abandoned the proposed transaction shortly after the FTC challenged the merger.

96. Under the Horizontal Merger Guidelines (Section 1.32), uncommitted potential entrants are assigned a market share. Firms that must commit resources to enter or take longer to enter are not treated as current participants in the market, but are regarded as potential entrants (Horizontal Merger Guidelines, Section 1.32).

97. "Safe harbor" provisions, such as FERC's proposed exception from reporting if a merger's impact on concentration is de minimis, may be attractive because they can reduce the regulatory burden where anticompetitive effects are especially unlikely. Similarly, in our review of merger filings under the Hart-Scott-Rodino premerger reporting program, certain classes of transactions are exempted from reporting because, based on our experience, they are highly unlikely to harm competition. Where that determination cannot be made on an a priori basis, merging companies are required to submit a basic amount of information. In the vast majority of cases, we are able to determine very quickly, based on that information, that further investigation is unnecessary. But in many other cases, a more detailed examination, based on a variety of information sources, is needed to check for the possibility of anticompetitive effects. A fraction of the latter become full investigations and litigated matters.

The presence of a safe harbor provision creates strong incentives for firms to portray acquisitions in such a way that the acquisition qualifies for the safe harbor treatment. The incentive to "shoe horn" the evidence to fit within the safe harbor is greater when failure to fit within the safe harbor causes substantially greater reporting and litigation costs to merger applicants. In our experience, it is important in these circumstances to seek independent verification of the information used to qualify the proposed acquisition for safe harbor treatment.

98. Notice, 63 Fed. Reg. at 20353.

99. Alternatively, this market dynamic can be captured if the rate that is frozen is set below the current level.

100. During periods of moderate inflation, a rate cap lacking an inflation adjustment may provide a rough substitute for a technology adjustment, since real prices will fall modestly in these circumstances, inversely with gradual technical improvements rates. With deflation or substantial inflation, there would be greater cause to separate inflationary and technological effects on costs.

101. See Richard Green, Has Price Cap Regulation of U.K. Utilities Been a Success?, 12 Private Sector 25-28 (Dec. 1997); Lambert, Privatizing Electricity in Britain: The Role of the National Grid, 122 Pub. Util. Fortnightly 14-18 (Mar. 30, 1989).

102. Notice, 63 Fed. Reg. at 20348.

103. Horizontal Merger Guidelines, Sections 3 and 4.

104. The Horizontal Merger Guidelines (Section 1.41) generally prescribe capacity as an appropriate measure of market share for relatively undifferentiated products and dollar sales if firms are distinguished primarily by differentiated products.

105. For example, some states are considering requirements that a portion of electricity supplies come from facilities that use renewable sources of energy for generation. Where such legal requirements are in place, lower-cost electricity produced from non-renewable fuel sources may not be a close substitute for higher-cost electricity produced from renewable fuel sources.

106. FTC staff Comment to the Maine Department of the Attorney General and Public Utilities Commission (May 29, 1998).

107. Horizontal Merger Guidelines, Section 2.21.

108. Notice, 63 Fed. Reg. at 20343, 20349.

109. Horizontal Merger Guidelines, nn. 6 & 20 and Section 2.21. Indeed, the FTC has brought cases that focus on these other performance measures when a transaction may significantly affect these aspects of economic performance. See, e.g., *Boston Scientific Corp.*, 119 F.T.C. 549 (1995). An early suppression of technology case was *United States v. Automobile Mfrs. Ass'n*, 307 F. Supp. 617 (C.D. Cal. 1969). For a discussion of FTC and DOJ cases regarding technological competition, see FTC staff report, *Anticipating the 21st Century: Competition Policy in the New High-Tech, Global Marketplace*, Ch. 7 (1996).

110. For example, if a substantially higher percentage of the merging parties' sales occurs in a particular season, while other firms' sales are more evenly distributed across the seasons, the parties may report data from a "typical month" that leads to a high estimate of sales by competing firms and a low estimate of their own sales. In these hypothetical circumstances, the merging parties' approach would minimize the reported effects of the proposed merger on market share statistics.

111. Under the delivered price test currently used by FERC, the scope of relevant geographic markets depends (other things equal) upon which value is nominated as the appropriate pre-merger price. Relevant suppliers would then include all suppliers that, given their costs of generation and transmission, can deliver power to a specific destination market at no more than 105 percent of the pre-merger price in that market. Consequently, a high estimate of the pre-merger price would generally support a broader and less concentrated geographic market; alternatively, a low estimate of the pre-merger price might support a conclusion that the merging parties do not compete in that relevant market.

112. The FTC did not issue a final order in this case because PacifiCorp withdrew from the merger <[www.ftc.gov/opa/9807/petapp39.98.htm](http://www.ftc.gov/opa/9807/petapp39.98.htm)>.

113. At current electricity prices, Mohave operates at full capacity. Hence Mohave is currently an infra-marginal producer and unlikely to be a price setter. However, as California deregulates its electricity market, prices are likely to fall and Mohave could then be in a position to be a marginal, price-setting plant.

114. See, e.g., Testimony of Commissioner Nora Mead Brownell, Pennsylvania Public Utility Commission, Transcript of Federal Trade Commission Public Workshop: Market Power and Consumer Protection Issues Involved with Encouraging Competition in the U.S. Electric Industry at 84 (Sept. 13, 1999); Testimony of Alfred E. Kahn at 169 (Sept. 13, 1999) <<http://www.ftc.gov/bcp/elecworks/index.htm>. See also the discussion in Chapter VIII, Consumer Protection, which discusses other considerations that may have an effect on entry.

115. The staff takes no position as to whether stranded cost and benefit recovery is in the public interest -- a determination best made by state and local regulators with knowledge of unique local circumstances.

116. Entry in generation could take the form of new generation facilities, or it could consist of improved transmission capacity that makes distant generation sources more effective competitors to local generation sources.

117. This discussion is developed in the context of retail competition and retail stranded costs. Similar concerns may arise concerning wholesale competition and stranded costs.

118. Recent publications that discuss specific instances and present a similar discussion of the issues include Richard Pierce, *Conceptual Issues Raised by the PECO/Enron Dispute*, 11 *The Elec. J.* 26-38 (Apr. 1998); and Jeffrey D. Watkiss, *Retail Competition: Preliminary Results*, Electric Utility Consultants' Transmission Pricing Conference, Denver, Colorado (June 26-27, 1998).

119. Under traditional regulation, the price of electricity is a bundled price that includes generation and transmission/distribution components blended together. Under most competitive scenarios, the individual components are unbundled and reported separately. Here we refer to the generation component of traditional rates as the "energy charge" and the transmission/distribution components as the "lines charge."

120. The level of the incumbent's energy charge necessary to deter entry depends, in part, on the costs faced by prospective entrants. Establishing a very low energy charge -- one that is below the expected variable costs of potential entrants, for example -- is quite likely to deter entry.

121. In theory, if a state determines not to permit 100 percent stranded cost recovery, the utility's incentive to engage in entry-detering pricing of energy charges will be weakened, depending upon the amount not recovered. Although the aggregate stranded cost recovery amount is lower, which should result in a lower total price for electricity to consumers and increased output by producers, the actual effect on output may be slight because electricity demand is commonly thought to be relatively inelastic, at least in the short run.

122. Although the new supplier would bill and collect these three charges, it would remit the stranded cost recovery surcharge to the vertically integrated incumbent.

123. If there is uncertainty about the viability and reliability of new suppliers, as is likely, customers may be reluctant to undertake the costs of search and of switching to alternative suppliers until such suppliers are operating.

124. Similarly, if entry takes longer than the period allowed for stranded cost recovery, artificially low energy charges during the recovery period may not affect the timing of entry or the length of the transition between the end of the stranded cost recovery period and entry. Assuming that entry is motivated by prospective profit at the time the entry takes place, artificially low prices during the interim are unlikely to change the potential entrant's evaluation of the attractiveness of entry so long as entry takes longer than the stranded cost recovery period.

125. A policy of fixing the level of stranded costs at the onset may solve the problem in principle because it makes it impossible for the incumbent firm to influence the level of stranded cost recovery by lowering the energy charge during the recovery period. This may not be a sufficient remedy in practice, however, because it may motivate incumbent firms to overstate stranded costs (understate the competitive level of energy charges) and to understate its ability to reduce stranded costs in ways that deter entry and are difficult for regulators to detect.

126. Massachusetts, for example, has required that generation capacity be divested as a condition for stranded cost recovery. Edison Electric Institute, *Retail Wheeling & Restructuring Report*, A Quarterly Report 65 (Mar. 1998). New York State similarly has required divestiture of most generating facilities. Edison Electric Institute, *Retail Wheeling & Restructuring Report*, A Quarterly Report 91 (June 1998). This approach also provides certainty about the magnitude of stranded costs by defining stranded costs as the gap, if any, between the sale price of the plants and their regulated (book) value. California has required divestiture of a large portion (50%) of generation assets. California, Brubacker & Associates *Electric Industry Restructuring Newsletter* 1 (Oct. 1998). To date, all divestiture sales have occurred at prices above the book value of the generating facilities. The premiums over book values range from 19% to 253% for completed transactions. One pending transaction involves a premium over book value of 485%. *Electric Utility Plant Divestitures: Transaction Summary*, Brubacker & Associates' *Electric Industry Restructuring Newsletter*, insert (Oct. 1998).

127. Fuel costs (including transportation costs for fuel) typically represent a substantial proportion of total generation costs, and differences in fuel costs typically represent a large portion of the difference in the relative costs (both total and variable) of various generating facilities. Hence, a minimum energy charge set at fuel costs represents both a substantial difference from a near-zero energy charge, and a sufficient inducement to entrants to invest either in new generation with low fuel costs or new transmission providing access to low-cost generation.

128. Net stranded benefit recovery implemented with lower energy charges would have the reverse effect, but would equally distort choices about electricity use. By contrast, payments of net stranded benefits to customers based on past consumption would avoid this type of distortion.

129. Federal Trade Commission Policy Statement on Deception, appended to *Cliffdale Assocs., Inc.*, 103 F.T.C. 110, 165, appeal dismissed sub nom. *Koven v. FTC*, No. 84-5337 (11th Cir. 1984) (Deception Statement).

130. *Id.* at 177.

131. *Thompson Medical Co., Inc.*, 104 F.T.C. 648, 816 (1984), *aff'd*, 791 F.2d 189 (D.C. Cir. 1986), cert. denied, 479 U.S. 1086 (1987). Information concerning the cost of a product or service also has been found to be material. Deception Statement at 174.

132. See *Pfizer, Inc.*, 81 F.T.C. 23, 64 (1972); FTC Policy Statement Regarding Advertising Substantiation, appended to *Thompson Medical Co.*, 104 F.T.C. 648, 839 (1984), *aff'd*, 791 F. 2d 189 (D.C. Cir. 1986), cert. denied, 479 U.S. 1086 (1987).

133. 16 C.F.R. Part 260 (FTC Green Guides).

134. To conclude that these terms are inherently misleading would mean they effectively would be banned, a drastic and probably unnecessary step.

135. See, e.g., 42 U.S.C. § 7135(j)(3) (Energy Information Administration Act, definition of "renewable energy resources"); 10 C.F.R. § 451.2 (Department of Energy, Renewable Energy Production Incentives, definition of "renewable energy source").

136. We use the term logo here to include the logo, name, and other elements used to identify the regulated utility.

137. Arguably, injury could occur even if the affiliate did not renege on its promises, because the actual expected value of the promise is less than the consumer perceived it to be due to the affiliate's use of the parent utility's logo.

138. The rare exception would be a customer (usually a large, remote industrial user) who is connected directly to a generation source rather than being supplied through the power grid. There probably would be little advertising associated with such exceptional cases.

139. An alternative system for tracking electricity, referred to as a tradeable tags system, also has been proposed. In this system, each characteristic would be assigned a tag, which could be traded separately from the electricity itself. The system would work similarly to the system of sulphur emissions certificates administered by the Environmental Protection Agency. . . . See "Uniform Consumer Disclosure Standards for New England," National Council on Competition and the Electricity Industry (Jan.1998) <[www.rapmaine.org/nccei/altindex.html](http://www.rapmaine.org/nccei/altindex.html)>.

140. Draft Guidelines, Section 2(b), Substantiation.

141. Melissa J. Hermann & Brian Roe, "Consumer Research on Tracking Approaches and Product Versus Supplier Labeling," National Council on Competition and the Electric Industry (Oct. 1998).

142. It may make a difference to consumers if the environmental benefits associated with the power they are buying will be enjoyed in a remote geographical area rather than in the region where they live. If advertising implied a geographical scope that was different from the scope of the tagging system, the existing guidelines prohibiting misrepresentation or overstatement of environmental benefits would cover them. This problem could also be solved by limiting the geographical area over which tags can be traded.

143. FTC Green Guides, 16 C.F.R. § 260.7(e).

144. The chilling effect on numerical or percentage claims could have economic consequences for the electricity market's development as well. If the claim by a company that wishes to advertise its wind power is limited by the strict need to produce the claimed amount of wind power, then the company will be less likely to be able to obtain an adequate return on the investment that it made. Thus, there will be less incentive for companies to invest in environmentally superior technologies that happen to have variable production potential, a result contrary to most states' goals of encouraging such development.

145. "Information Disclosure for Electricity Sales: Consumer Preferences from Focus Groups," Regulatory Assistance Project (Mar. 19, 1997) <<http://www.rapmaine.org>>.

146. The National Association of Attorneys General (NAAG) adopted a resolution in March 1997 supporting "the establishment of appropriate and adequate consumer safeguards [in] . . . the restructured retail electricity marketplace," including uniform disclosures in plain language of "price, duration of contract, quantities, and other material terms." The National Association of Regulatory Utility Commissioners (NARUC) and the New England Governors' Conference, Inc. also have issued resolutions supporting states' adoption of mandatory, uniform disclosure standards (NARUC in November 1996 and the Governors' Conference on June 3, 1997).

147. On March 3, 1998, the New England Conference of Public Utility Commissions (NECPUC) issued a Model Rule on Information Disclosure, intended as "a common starting point for commissions in the region developing information disclosure policies," based on the belief that "a uniform regional approach is in the public interest." The Model Rule is available from the Regulatory Assistance Project web page at <[www.rapmaine.org/nepage.html](http://www.rapmaine.org/nepage.html)>.

148. S. 1047, introduced May 13, 1999 by Sen. Frank Murkowski and referred to the Senate Committee on Energy and Natural Resources and the House Commerce Committee.

149. [Letter of the Federal Trade Commission to House Commerce Committee Chairman Thomas Bliley, Analysis of H.R. 2944 (Jan. 14, 2000)] at 4.

150. The feasibility of requiring disclosure of fuel source may depend on availability of tracking mechanisms through which sources of supply may be substantiated and verified. Likewise, reasonably reliable data for emissions must be available to substantiate any required disclosures. Other questions would be whether fuel source and emissions data would be based on historical or projected information, and the degree of precision required for such data.

151. Information about the California uniform disclosure and label requirements is available at <<http://www.energy.ca.gov/sb1305/documents/index.html>>; the NECPUC proposal is available at <<http://www.rapmaine.org/nepage.html>>.

152. "Label Testing: Results of Mall Intercept Study," National Council on Competition and the Electric Industry (April 1998) <[eetd.lbl.gov/nationalcouncil/publications.html](http://eetd.lbl.gov/nationalcouncil/publications.html)>.

153. For suppliers that do not wish to incur the expense of maintaining and substantiating information for the label, [a state commission] may wish to allow suppliers to report system average information or to indicate that supplier-specific information is not shown.

154. For example, some contract terms may be more suitable for required disclosure in a contract document, whereas in advertising, it may be advisable to require that only the one or two most important terms be disclosed.

155. *FTC v. FutureNet*, No. 98-1113GHK (AIJx) (C.D. Cal. 1998).

156. 15 U.S.C. § 1601 et seq.

157. 15 U.S.C. § 1691 et seq. The TILA and ECOA are implemented by Regulation Z, 12 C.F.R. § 226, and Regulation B, 12 C.F.R. § 202, respectively. Although the Federal Reserve Board promulgates these regulations, the Commission enforces these requirements for most non-bank entities around the nation. See Section 108(c) of the TILA, 15 U.S.C. § 1607(c) and Section 704(c) of the ECOA, 15 U.S.C. § 1691c(c).