



UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION
WASHINGTON, D.C. 20580

**BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION
DEPARTMENT OF ENERGY**

WASHINGTON, D.C.

In The Matter of

**Promoting Wholesale Competition Through
Open Access Non-discriminatory Transmission
Services by Public Utilities, Recovery of
Stranded Costs by Public Utilities and
Transmitting Utilities;**

**Proposed Rulemaking and
Supplemental Notice of Proposed Rulemaking**

Docket Nos. RM95-8-000 & RM94-7-001

**Comment of the Staff of the
Bureau of Economics of the Federal Trade Commission(1)**

August 7, 1995

I. Introduction and Summary.

The staff of the Bureau of Economics of the Federal Trade Commission (FTC)(1) appreciates this opportunity to respond to the Federal Energy Regulatory Commission's (FERC) notice of proposed rulemaking.(2) The staff of the FTC has a longstanding interest in regulation and competition in energy markets, including proposals to reform regulation of the natural gas and electric power industries.(3)

Competitive opportunities in the generation of electric power have burgeoned in the last decade, stimulated by changes in relative costs of different types of generating plants and by changes in laws and regulations. But economic benefits for consumers of greater competition may be thwarted by features of the industry's traditional vertically-integrated structure and regulation. To remove obstacles to increased competition, FERC proposes rules that would call for utilities to offer open, non-discriminatory access to wholesale transmission services. To address issues that are likely to delay the transition to a more competitive market environment, FERC proposes rules to govern recovery of "stranded costs," which FERC describes as uneconomic costs (primarily generation) that a utility has already incurred. We fully support the intention of FERC's efforts, to promote greater competition in this industry so that the benefits of greater efficiency can promote lower electricity rates for consumers. Our comments address aspects of the particular methods FERC has proposed and assess how variations on FERC's proposals might accomplish its goals more effectively.

Operational unbundling would likely be more effective than functional unbundling and less costly than industry-wide divestiture. FERC's plan for "functional unbundling" of power generation from transmission services addresses a critical competitive issue by requiring vertically integrated utilities to grant open access and equal treatment to their competitors. This approach, however, would leave in place the incentive and the opportunity for some utilities to exercise market power in the regulated system. Preventing them from doing so by enforcing regulations to control their behavior may prove difficult. The problem would be most effectively prevented by completely separating ownership and control of generation from transmission. This separation would remove both the incentive and the opportunity to exercise market power, by eliminating the utilities' ability to discriminate in favor of their own generation operations. The additional benefits of full divestiture may be outweighed, however, by the costs and difficulties of implementing it industry-wide. It may be sufficient to require "operational unbundling," in which the dispatch of generating capacity and/or the operation of the transmission grid would be controlled by an independent entity. Operational unbundling could prevent discrimination and achieve the competitive benefits of open access more effectively and efficiently than would an attempt to mandate, regulate, and monitor access. In addition, operational unbundling would not incur the costs of full divestiture.

Competition problems in concentrated generation markets must still be addressed under open access. Open access will affect, but not obviate, FERC's assessment of competitive conditions in electric power generation, including its analysis of "generator dominance." The DOJ/FTC Horizontal Merger Guidelines show how to evaluate likely competitive effects of concentration among suppliers and changes in market contours. Expanding the number of suppliers potentially available is likely to make the electric power system more efficient and more competitive, but there may be circumstances, even under open access conditions, in which dominant suppliers might be able to exercise market power. Competitive conditions among mid-cost plants could be particularly significant.

Efficient transmission pricing must accompany open access. Pro-competitive reforms will not achieve their objectives, and might even prove counterproductive, unless prices and terms for transmission services also become economically efficient signals about investment and output. Achieving the economic benefits of unbundling will therefore depend strongly upon FERC's concurrent reform of transmission pricing. An aspect of efficient transmission pricing is the regime for resale of transmission rights in secondary markets, which will be especially important if FERC opts for functional unbundling alone. For secondary markets to perform their pro-competitive functions effectively, the cap on resale prices should be removed, so that prices for resales can become economically accurate signals about expanding transmission capacity. Transmission pricing based on market factors should assist in discouraging local transmitting utilities from favoring their own potentially unmarketable generation capacity and reduce their incentives to delay expansion of wholesale transmission capacity. The utilities might well share these incentives for delay with the agencies that regulate them locally, because delay might favor the interests of local customers.

Methods for recovering "stranded costs" should avoid market distortions and reward efforts to mitigate. We express no view about the net costs and benefits of recovering stranded costs from future, present, or past customers. We offer some views about the methods that might be used if FERC commits to recovery of stranded costs. FERC's choice of method will take on additional importance if other jurisdictions use it as a model. First, structuring recovery as excise charges is likely to distort price signals and may lead to inefficiencies. Instead, the method chosen should minimize market distortions. Second, shifting all costs to remaining customers could stimulate resistance and delay the transition to greater competition. To avoid that problem, FERC and state and local regulators should consider transitional rate caps or other methods to dampen the "rate shock" to remaining customers. Third, requiring that all savings from mitigation be passed through is likely to undermine utilities' incentives to innovate with services, marketing, and pricing. Alternatives that preserve those incentives to mitigate should be considered. Finally, recovery on a wider geographic basis may be appropriate for those investments that were undertaken to benefit a wider group of customers.

II. Operational Unbundling Offers Significant Advantages Over FERC's Proposed Functional Unbundling Approach.

The problem FERC is addressing is the risk that vertically integrated transmission monopolists will control access to transmission services in ways that inefficiently favor their own generation operations.(4) As long as all stages of the industry were regulated jointly as monopolies, the problem did not attract regulatory attention. It arises now because one stage of the industry, generation, is becoming more competitive.

A. 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.(5)

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.

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

FERC's proposed solution to these problems, functional 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. FERC anticipates that requiring the utility to use the same tariff it imposes on others will encourage the utility to adopt competitive and efficient transmission prices.(6) But FERC's proposal, by retaining integrated ownership and control of transmission and generation services, would 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.⁽⁷⁾ 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.⁽⁸⁾

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. Recognizing the advantages of structural separation in a context similar to what FERC is considering here, the FTC has required formal divestiture to prevent a firm from taking advantage of vertical relationships with its merger partner to circumvent rate-of-return regulation.⁽⁹⁾ Regardless of whether full divestiture is a cost-effective solution here if applied nationwide to the entire industry, it could still be the correct remedy for specific anticompetitive behavior by individual utilities.

A primary illustration of the benefits and costs of functional separation short of complete divestiture is provided by the experience of the AT&T monopolization case. Divestiture was ordered to eliminate and prevent AT&T's anticompetitive behavior. One purpose was to separate AT&T's regulated operations from its unregulated ones. But despite the formation of the regional Bell operating companies as completely independent, locally regulated entities, the regulated and unregulated operations that had been combined in AT&T were not separated completely. AT&T remained in the (regulated) long distance business. The regional Bell companies were allowed to continue such (unregulated) services as publishing directories and may request permission to engage in other businesses as well. Interpreting the order and reviewing applications for exceptions from its constraints has entailed nearly continuous, costly oversight, an experience which may counsel in favor of making distinctions and separations cleaner at the outset.

Achieving complete corporate divestiture can be costly, however, especially where assets and operations are thoroughly integrated. Devising an effective response to the competition issues in the electric power industry context is complicated greatly by the fact that the industry is already substantially vertically integrated. The potentially great costs of dismembering almost all existing corporate relationships in a vital industry must be considered and compared to the potential benefits, as well as to the costs and benefits of alternative approaches.⁽¹⁰⁾

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.⁽¹¹⁾ 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.⁽¹²⁾ 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.(13) 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.(14)

III. Competitive Conditions In Generation Must Still Be Monitored Under Open Access.

A factor in whether FERC will approve use of market-based rates for power is its assessment of competitive conditions in power generation.(15) Here, FERC asks whether, under an equal access requirement, regulation of prices for generated power can be relaxed or eliminated. The answer is, not necessarily. Although open access may lead to sufficient competition in some markets, FERC should still examine actual market concentration and competitive conditions in determining whether to loosen regulation.

A useful framework for examining the competitive effects of industry concentration and other market characteristics is set out in the Horizontal Merger Guidelines issued in 1992 by the Department of Justice and the Federal Trade Commission.(16) Under the Horizontal Merger Guidelines, product and geographic markets are defined in terms of the ability of a hypothetical monopolist to profit from a small (typically five percent), nontransitory increase in prices for the product within the area. Market concentration is evaluated for that product and that geographic area.(17) Antitrust analysis usually anticipates that, if concentration is high, anticompetitive effects such as coordinated interaction (collusion) or unilateral market power will be more likely, in the absence of ameliorating factors such as easy entry.(18) If the entry of new competition will rapidly and effectively constrain a price increase, then a dominant firm or collusive group probably could not exercise market power even in a concentrated market.(19)

Introducing open access to transmission would not prevent completely the exercise of market power in generation, but it is likely to limit the situations of competitive concern about market dominance. Open access could broaden the relevant geographic market for generation by alleviating impediments to wholesale wheeling. Broadening geographic markets typically results in lower concentration and thus reduced risk of market power. Opening a system to a larger number of generating plants could also lead to operating efficiencies, by more completely capturing gains from trade among facilities with different costs and by reducing the system's reserve requirements. Open access could increase the likelihood that a price increase will be met by timely and sufficient entry, either by new generator construction, new transmission capacity, or new transmission rights. And with open access, entrants would be more likely to enjoy nondiscriminatory prices for transmission service. But open access alone would not eliminate the need to consider the problem of generation market power. Although market dominance situations may become rarer, they will not necessarily disappear, so the specifics of each case may still have to be evaluated.(20)

Recent empirical work on electricity generation pricing in the United Kingdom may provide some insight about generator dominance and how to limit its effects.(21) The U.K.'s electric power reforms have taken place within the context of high concentration in generation. The findings of the U.K.'s electricity regulator and recent academic research show that the two dominant generators have exercised considerable control over price in many periods.(22)

Most relevant for this inquiry, however, is that most of the year, the market price in the U.K. is determined by relatively few plants — those with middle levels of cost.(23) Low cost plants are always dispatched (that is, operated). High cost plants are dispatched only at brief demand peaks or in emergencies. In most periods the marginal plants that set the price are the middle cost plants. Given this pattern, greater competition among middle cost plants could make the exercise of market power more difficult even if capacity at the extremes is concentrated.(24) In deciding whether to relax regulation in a market under open access, attention might be focused on the ownership structure of the middle-cost sources. Higher concentration overall may be more acceptable if concentration among middle-cost plants is low.(25)

We support FERC's efforts to identify generation markets where regulation can be relaxed. Where a generation market is found to be competitive, market based pricing should be permitted, or the benefits of industry restructuring will be limited or lost.

IV. Efficiency Gains from Open Access Depend on Concurrent Reform of Transmission Pricing.

A. Transmission Rates Must Be Made Responsive To Economically Relevant Criteria.

Economically efficient transmission rates will be vital to obtaining the potential efficiency benefits of open access.⁽²⁶⁾ The transmission grid is likely to remain a regulated monopoly, no matter what method is used to ensure or encourage open access to it. FERC acknowledges that current "postage stamp" transmission rates are not sensitive to distance and actual electricity flows, and thus may not lead to economically efficient employment of, or investment in, generating capacity.⁽²⁷⁾ Unless transmission rates are economically efficient, open access will not serve to give buyers, sellers, and investors the right signals for developing new service alternatives, assessing where new plant and transmission lines should be located, or determining when entry is warranted. Transmission rates should send signals to allocate resources efficiently in the short run and to invest efficiently in the long run. Thus, transmission rates should respond to such factors affecting marginal cost as distance and time of day, and, where capacity constraints limit output, to the incremental cost of removing bottlenecks or adding capacity.

B. Secondary Transmission Markets Are Vital to Efficiency-Enhancing Reform.

FERC's proposals would require public utilities to offer a wide variety of transmission services, including point-to-point commitments of transmission capacity. FERC observes that competition is likely to be enhanced if customers can reassign, or resell, rights to these services, because customers would then perceive lower risks in making firm contracts. We concur with FERC's positive view of such secondary market sales of transmission rights.⁽²⁸⁾

In many settings, secondary markets can lead to more efficient use of resources. In previous comments to FERC, DOJ and the staff of the FTC have encouraged the creation of secondary markets for rights to transportation of natural gas.⁽²⁹⁾ More recently, the values of secondary markets were described in the context of trading in operating rights, or "slots," at congested airports.⁽³⁰⁾ An economically efficient solution to problems like these would limit the use of the resource and allocate rights of use to those who value them most highly. These efficiencies can be achieved by permitting holders to buy, sell, and exchange their rights to use the resource. This secondary market trading helps ensure that the available capacity is used to offer services that consumers value most highly. The secondary market is particularly important in bottleneck areas, where switching from low to high value uses of capacity is likely to produce the greatest benefits. Moreover, secondary market prices embody important information about the social benefits of investment in additional capacity. Prices will be higher for peak demand time periods, when capacity will be fully utilized. The higher price encourages lower-valued uses to shift to off-peak times or to other sources. Thus, the difference in cost of rights at different times can relieve the need to make expensive additions to capacity.

Application of these insights to the electric power industry could significantly improve efficiency. A secondary market in rights to transmission services could help ensure that those services are used by the wholesale customers that value them most highly, in turn assuring that their use reflects the consumers' valuation too. And the price signals in the secondary market could provide information that will be important to investment decisions, encouraging expansion of transmission capacity where it would be most productive.

A secondary market for transmission services may be especially important at bottleneck interconnections. Because available capacity at a bottleneck is scarce, prices may be relatively high there even if conditions are competitive. Such high prices would be a signal to expand capacity.⁽³¹⁾ But a monopolist or coordinated group of transmission

owners at that point might exercise market power to elevate prices even above the scarcity rents. A secondary market, by increasing the number of participants, could provide alternative sources and thus help avoid such an exercise of market power.

Because it would serve several important economic functions, a secondary market for transmission services should be permitted and even encouraged to develop fully and rapidly.

C. Restrictions on Prices in Secondary Transmission Markets May Limit Efficiency Gains from Open Access.

FERC forbids resale of transmission rights at a price higher than what the utility was initially paid for them.⁽³²⁾ FERC asks whether this restriction should be lifted. Lifting this price ceiling would permit important economic efficiency gains from open access to be realized.⁽³³⁾ A particularly important effect relates to FERC's proposal about expansion of the transmission grid.

FERC's proposal would require that a public utility expand its wholesale transmission grid when customers apply for such service (and supply appropriate financial guarantees). But building new transmission capacity may not be the lowest cost way for a new customer to obtain point-to-point transmission service. Instead, the service might be obtained more cheaply by buying transmission rights from a current user who values them less than the new customer does. This efficient resale transaction would be discouraged if the current user could not charge a price high enough to make reselling the rights attractive. Customers whose demand is too small to justify their investment in new transmission capacity, but great enough to justify paying a price higher than current customers could accept to release their transmission rights, could be frustrated.

If the cap on resale prices is removed, current transmission customers would face an opportunity cost for their transmission service — that is, the value of the alternative use of the service — equal to the price that new transmission customers face for the service. This equality means that price signals for transferring and adding to capacity would be efficient. By contrast, retaining the cap could mean that current and prospective transmission customers would face different prices for equivalent services. That inequality could perpetuate inefficiencies.

D. Remaining Incentives To Exercise Transmission Market Power Call For Careful Monitoring of Exemptions from Orders to Expand Capacity.

A public utility with market power in transmission may have opportunities to profit by raising transmission prices. Existence of stranded costs could provide an opportunity to exploit that market power. Market power usually harms all of a firm's customers, but the situation in the electric power industry is unusual: the customers that continue to buy power from a utility with transmission market power may instead gain from its exercise. The utility might use its market power over transmission services to collect a greater share from the customers who depart to buy power elsewhere, rather than collect it all from the customers who remain. The utility and its remaining customers — as well as the utility's investors and even its local regulatory authority, representing the interests of continuing local customers — could thus share an incentive to favor the exercise of its transmission market power.

A utility might also attempt to take advantage of its market power by delaying transmission expansion. Increased demand for transmission services could come either from its departing wholesale customers or from wholesale customers from other areas wishing to wheel power through its territory. The utility might decide not to expand transmission capacity, or local authorities might refuse to authorize it.⁽³⁴⁾

Despite these opportunities to exercise transmission market power, FERC proposes to permit waivers of its expansion orders.⁽³⁵⁾ A utility could be exempted from a FERC order to expand if the utility shows that its good faith attempts to comply have been blocked by inability to obtain regulatory approvals or to assemble necessary rights of way. Determining good faith could be difficult. Even assuming good faith, rejection by local regulatory authorities, for

whatever reasons, could hamper competitive open access.⁽³⁶⁾ Because wide spread waivers could undermine the transition to open access competition, waiver applications may require careful attention.

An advantage of operational unbundling, separating ownership of generation from control of transmission, over functional unbundling is that it will more effectively prevent the transmitting utility from favoring its own generation, so an owner of potentially stranded generation plant would find it more difficult to favor that plant over more efficient sources. Operational unbundling also limits the local regulator's ability to favor potentially stranded generation plant by denying rights to expand transmission capacity.

V. Methods of Recovering Stranded Costs Must Avoid Introducing Distortions and Discouraging Mitigation.

FERC believes that increased competition under open access will cause some historic costs to become "stranded." FERC defines these "stranded" costs as legitimate and verifiable historic costs on which suppliers "could not earn a reasonable return in a competitive market."⁽³⁷⁾ FERC proposes that the stranded costs under its jurisdiction be recoverable from customers, rather than borne by investors. FERC believes that this assignment of costs would speed the transition to competition in the industry. Under the Proposal, a wholesale customer taking advantage of open access to buy power from a new supplier could be required to pay the former supplier a surcharge on its transmission services, designed to recover a share of the former supplier's stranded costs. Before a utility could include stranded cost charges in its transmission tariffs, it would have to demonstrate that it has taken efforts to mitigate the threatened losses from customers' departure.⁽³⁸⁾ A customer's maximum possible stranded cost exposure, before mitigation, would be the revenues that the utility would have received from the customer had the customer continued to take service from the utility.⁽³⁹⁾

This comment takes no position about the overall balance of benefits and costs of recovery of stranded costs from departing wholesale (and retail) customers. Recovery might encourage transmission companies to enter the open access regime more quickly, but it could also reduce customers' incentives to switch to suppliers with the lowest prices, which would tend to slow the transition to competition.⁽⁴⁰⁾

A. Efficiency Gains from Open Access May Not Be Realized Rapidly If Stranded Cost Recovery Distorts Prices.

Different methods of recovering stranded costs could have significantly different economic effects. The likely differences are explored in the public finance literature about different forms of taxation.⁽⁴¹⁾ FERC's 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 with the amount purchased in the future. Its effects can be contrasted with the effects of a lump sum tax, which, in the present context, might be analogous to a fixed charge based on electricity use in the past.

If possible, the method chosen should not distort the price signals that the economy relies upon to prompt efficient decisions about production, consumption, and investment. The ideal method would have a neutral effect on departing customers' marginal price and output decisions. The lump sum approach is neutral in this sense, but the excise approach is not. The excise charge approach effectively increases the unit price of a customer's future services, and increasing its prices is likely to reduce how much it purchases. Thus, adding a charge to a customer's future transmission rates would lead the customer to search harder for substitutes. If the effective transmission prices it must pay exceed competitive marginal costs, the customer may use generators that are inefficiently close to its load. The degree of distortion will depend on the customer's price elasticity of demand for transmission services. The cumulative effect could be to reduce the number of competitive generating suppliers serving the market.

By contrast, under the lump sum approach, the departing customer's stranded cost liability would be fixed, and the charge would not depend on how much transmission service it used in the future. The lump sum approach, unlike the

excise charge approach, would establish a fixed liability that would not distort the customer's economic incentives at the margin.(42)

An excise approach is likely to increase uncertainty about how much the stranded investment charges will recover. Greater uncertainty about how much is at stake could increase remaining customers' perceived risk that the stranded costs will be shifted to them. The scenario that remaining customers would most fear, and which greater uncertainty may exacerbate, is a "death spiral" of continually increasing prices as the utility tries to make up for the revenue lost from departing customers. To avoid this potential obstacle to public acceptance of the transition to competition, FERC may wish to consider temporary, transitional price caps on rates for remaining customers. These could be especially important to cushion the transitional disruptions for residential accounts or other small customers that are most likely to lack immediate self-help alternatives. Such price caps have been used in the U.K. with apparent success to limit cost shifting and to promote public acceptance of regulatory reform by avoiding "sticker shock.(43)

FERC maintains that the magnitude of stranded costs at the wholesale level is relatively small, so inefficiencies from a stranded cost recovery program should be relatively small. But FERC's decision about the form of recovery may become a model for states to apply at the retail level. Because of the potential secondary effect, FERC's approach may have system-wide implications.

B. Proposals About Mitigation Savings Could Reduce a Utility's Incentives To Use Stranded Capacity.

The FERC proposals appear to envision that all of a utility's savings from efforts to mitigate its stranded costs will be applied to reducing the customers' stranded cost liability.(44) Requiring that all savings be passed through to customers could adversely affect the transition to competition. The requirement would undercut the utilities' incentives to mitigate their stranded costs through innovative services, marketing, and pricing. If utilities refrain from such innovation, use of open access could be curtailed and broad secondary markets for transmission could be significantly delayed. And if the amount of a utility's stranded cost or mitigation obligation remains unsettled over time, competitive discipline is likely to be blunted by regulatory adjustment in response to inroads by the utility's competitors, and the industry will continue to be characterized more by regulation than market forces.

Suppliers generally have strong incentives to respond to changing demands with product and service innovations that make the best use of their capacity. As regulation in this industry is reformed, suppliers of electric power could have similar incentives to innovate in order to mitigate threatened losses, such as those that are here labeled "stranded costs.(45) But requiring that all mitigation savings be passed through to the departing customers will effectively impose a 100 percent tax on mitigation savings. High tax rates on an activity generally discourage it.(46) Thus requiring complete pass-through may discourage mitigation efforts.

Other treatments of savings may not discourage mitigation as much. The utility might be required to pass through only some fraction of mitigation savings to the departing customers, adjusting the fraction periodically in light of experience. This fractional pass-through approach resembles the cost saving incentive that some states have instituted in their rate of return regulations.(47) While incentives to mitigate would be greater under this approach than under full pass-through, they would still be lower than in a competitive market.(48)

Another approach would focus on the utility's dealings with its remaining customers. At the outset, rate caps for remaining customers could be scheduled to be progressively reduced by amounts intended to reflect how much the utility ought to save if it had strong incentives to mitigate. For example, if the per kilowatt charge was initially capped at 9 cents for residential customers, including 4 cents to recover stranded costs, the rate might be set to decline by 5 percent per year for 5 years to reflect anticipated mitigation savings.(49) The minimum reasonable mitigation amount would be the costs the utility would avoid by not producing the power that the departing customer had used. Under this approach, the utility has full incentive to mitigate and uncertainty about the amount is eliminated.

None of the alternative mitigation approaches is perfect. Coordination between methods used by the states and by FERC to account for mitigation savings may be important in providing a smooth and swift transition to increased competition. Differences in treatment and different levels of incentive to mitigate may lead to uncertainty about the amount of mitigation that will be recognized and hence about the amount of customers' net stranded cost liability. Uncertainty about the magnitude of the risk and about who would shoulder it could delay or diminish interest in open access, in turn delaying the establishment of competition in power generation.⁽⁵⁰⁾ Coordination among FERC and state regulators may reduce confusion, complexity, and litigation delays.

C. Stranded Costs Might Be Recovered From the Entire Customer Base That Benefitted From These Costs.

FERC proposes to assign stranded costs to individual departing customers, so that stranded wholesale generation costs will be assessed and recovered on a utility-by-utility basis.⁽⁵¹⁾ This approach would lead to high surcharges in areas served by utilities with high stranded costs and little or no such charges in some other areas. Some investments that now appear as stranded costs may have been intended to benefit customers over a wider area than a single utility.⁽⁵²⁾ Arguably, stranded costs that benefitted broader groups of customers should be collected from that broader group of customers if the stranded cost recovery program is to function as a user fee. A broader scope could also cushion the "rate shock" to remaining customers. National or regional assessment methods could recover stranded costs undertaken to benefit these wider groups of customers.

VI. Conclusions

Open access to transmission services should enable increased competition among power generators to benefit consumers through lower rates. The operational unbundling approach to open access would separate control of access to the transmission grid from ownership of generation. This approach could be more effective than one alternative, functional unbundling, and less costly to implement than another alternative, full divestiture. Indeed, operational unbundling has nearly all the advantages of complete divestiture, at lower cost.

In determining the appropriate level of regulation for wholesale electricity prices under an open-access regime, the analysis set out in the FTC and Department of Justice Horizontal Merger Guidelines provides a logical framework for evaluating the likely economic effects of concentration among suppliers, including suppliers of electric power. As recent experience with the British electricity system suggests, dominant suppliers might exercise market power even in open access conditions. Competitive conditions among generation suppliers will still have to be examined.

However FERC chooses to achieve open access to transmission services, it is critical that transmission pricing be made economically efficient. The competitively vital secondary market for rights to transmission service should be encouraged, and the price cap on resales should be lifted.

This comment takes no position on the net costs or benefits of recovering stranded costs from future, present, or past customers. But if FERC adopts a program to recover stranded costs, the form that program takes could be important, in part because other jurisdictions could use it as a model. Setting temporary rate caps for remaining customers could ease the transition to a more competitive industry by dampening the shock to customers with fewer alternatives. Structuring stranded cost recovery as excise charges is likely to distort price signals and lead to inefficiencies; instead, the method chosen should minimize price distortions. Requiring that all savings from mitigation of stranded costs be passed through to customers is likely to undermine utilities' incentives to innovate; instead, methods that maintain incentives to innovate should be considered. Recovery on a wider geographic basis could be appropriate for those investments that were undertaken to benefit a wider group of customers.

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(1) This comment represents the views of the staff of the Bureau of Economics of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any indi

(3) The staff of the FTC has commented on electric power regulation to the South Carolina Legislative Audit Council (February 28, 1994) ("South Carolina Comment"), the California Public Utilities Commission, Nos. R94-04-031 and I.94-04-032 (June 8, 1994), and to FERC, Dkt. RM85-17-000 (1985). In addition, the staff of the FTC has often commented to FERC about natural gas regulation; see comments about pipeline regulation after partial wellhead decontrol, Dkt. RM85-1-000 (1985), alleged anticompetitive practices of pipeline marketing affiliates, Dkt. RM87-5-000 (1987), and capacity brokering, Dkt. RM8

(4) Vertical integration was believed necessary, in part, to assure system reliability. Paul Joskow and Richard Schmalensee, *Markets for Power* (1983). Experience under the Public Utility Regulatory Policies Act of 1978 and the Energy Policy Act of 1992 has "demonstrated that traditional, vertically integrated public utilities need not be the only sources of *reliabl*

(5) 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*

(6) Under the FERC "functional unbundling" proposal, utilities' tariffs would be required to separate generation from transmission and itemize the components of transmission and ancillary services for each transmission service provided. Utilities would be barred from using private information to favor their own operations; rather, a utility and its transmission customers would be required to use the same electronic network to obtain transmission informati

(7) Brennan, *Cross Subsidization and Cost Misallocation by Regulated Monopolists*, *supra* note 5; 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

(8) 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 int

(9) Occidental-MidCon, 109 F.T.C. 167 (1986) (divestiture of pipeline ordered, to ensure that the owner of unregulated gas reserves did not inflate the price of the self-supplied input). Moreover, in circumstances similar to those FERC is considering here, structural remedies have been called for when necessary to provide non-integrated buyers with an independent source of a product they would otherwise have to purchase from their competitor. See, e.g., Tele-Communications Inc. & Liberty Media Corp., FTC Dkt. No. 941- 0008 (Nov. 15, 1993) (consent order accepted for public comment; later withdrawn when transaction was superseded by another) (Commissioners Owen & Azcuenaga dissenting); Arco-Union Carbide, 114 F.T.C. 250 (

(10) A major transaction cost of achieving full divestiture of public utility firms would be litigation about compliance with coverage ratio requirements in their bond covenants. In addition, changing ownership of nuclear power facilities will be a complex and difficult task, involving more stringent asset coverage ratios. These problems would be particularly difficult to deal with on a nationwide basis;

(11) South Carolina Comment, *supra* note 3, 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 a

(12) 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, *supra* note 3, Appendix

(13) 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 Ince*

(14) 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 affiliat

(16) Although the Horizontal Merger Guidelines are applied to merger analysis, the general principles of industria

(17) Concentration is measured by the Herfindahl-Hirschman Index (HHI), which is the sum of the squares of the market shares of individual firms. The Guidelines characterize markets as unconcentrated (HHI below 1,000), moderately concentrated (H

(18) See *generally* Horizontal Merger Guidelines; F. M. Scherer and David Ross, *Industrial Market Structure and Economic Performance*

(19) Markets in which entry is quick and no sunk costs are entailed are termed contestable markets. In such markets, market power is unlikely even if there is only one current supplier. See William J. Baumol et al., *On the Theory of Perfectly-Contestable Markets*, in *New Developments in the Analysis of Market Structure* (Joseph Stiglitz & C. Frank Mathewson, eds., 1986); William J. Baumol et al., *Contestable Markets and the Theory of Industry Structure*

(20) FERC's decisions about wholesale interstate transmission pricing methodology are likely to have a significant impact on the definition of the relevant geographic market. Distance charges should provide more efficient signals for transmission decisions than do "postage-stamp" charges, which are independent of actual distance, since transmission costs are more strongly related to distance than to the number of utility territories crossed. Geographic markets defined with respect to distance charges should correspond to underlying cost conditions more accurately than market defined with respect to postage- stamp pricing. Whether t

(21) David Newberry, *Power Markets and Market Power* (1995, unpublished). In the U.K. system, "merit dispatch" — that is, use of the lowest price sources to meet projected demand — for each half hour is based on bids submitted the previous day. Thus, there are thousands of separate electricity "markets" each year, denominated by

(22) Newberry, *supra* note 21; *see also* South Carolina Comment, *supra* note 3, at 52-53, which observed:

Evaluators of the British system have emphasized one major drawback in the manner the reforms have been implemented. Although there are ten generator firms, the structure of the generating industry is essentially a duopoly because the government's generation capacity was divided into only two entities. Consequently, these two firms may be in a position to affect the market clearing price substantially, by withholding even a small portion of their capacity. In an effort to discourage strategic capacity withholding, new franchising rules require an operationally capable plant to offer a bid and require the m

(23) Newberry, *supra* note 21. In the U.K., nuclear plants, with their low marginal costs, are run continuously. Natural gas p

(24) In the U.K. experience, prices at peak periods have risen dramatically because the peaking plants are so costly to operate. In evaluating peak prices, it is important to distinguish scarcity rents from effects of market power. Scarcity rents are the excess of price over cost that results when demand exceeds what a competitive market can supply (at that price) in the short run. Scarcity rents are an economic signal inviting entry or expansion. By contrast, market power effects appear when supply falls short of the competitive level because suppliers recognize that their output choices influence price. By withholding capacity, either individually, if they are dominant firms, or collectively, if they are coordinating their actions, firms with market power can profitably increase prices above the competitive level. If entry and expansion of generation is relatively easy and rapid, as FERC believes, then high peaking prices would probably represent scarcity rents, that is, signals encouraging entry of peaking capacity. By contrast, if higher prices do not lead to capacity expansion, FERC should examine the market conditions more c

(25) Conversely, if overall concentration was low but concentration among middle-cost generators was high, a more detailed analysis of the potential for market power could be called for. Identifying these factors will require understanding which plants are high-, middle-,

(26) The importance of transmission pricing policy to the development of competitive bulk power markets is discussed in more detail in the co

(28) FERC already allows public utilities to offer transmission rights, and owners of such rights may resell them. So far, though, few utilities have elected to sell such rights. The FERC proposals are likely to increase significantly the number and variety of such services available from primary owners of transmission rights. To the extent that FERC actively supports secondary market sales, the volume and variety of transmission rights available through secondary sales are also likely to increase. Primary and secondary transmission rights are likely to be good su

(29)

(30) Comment of the Staff of the Bureau of Economics, *Study of the High Density Rule*, Fed

(31) See

(33) A general policy of lifting the ceiling on prices for resale of transmission service rights need not be inconsistent with a program of temporary,

(34) The remaining customers' incentive to resist expansion of wholesale transmission capacity does not depend on whether power costs in the utility's service area are high or low. Curtailing expansion could discourage customers in a high-cost area from exiting to seek cheaper "imported" power elsewhere, and fewer exiting customers would mean fewer potentially stranded costs. Curtailing expansion could discourage potential customers outside a low-cost area from bidding for cheap power to "export" from the area, and without that additional demand local power prices might remain lower. (This assumes output would increase until the marginal cost equaled the higher price that the new customers, bidding from higher cost areas, would be willing to pay.) In each case, the cus

(36) Examinations of similar influences on local regulatory decisions include Leann Tigges and Mathew Clark, *Community, Class, and Cohesion in the Passage of Corporate Takeover Legislation*, 73 Soc. Science Q. 798 (1992), and Cletus Coughlin, Joseph Terza, and Vochira Arromeade, *State Government Effects on the Location of*

(37)" Notice, *supra* note 2, at 17,690. Some firms have incurred costs, included in their rate base, to comply with environmental requirements, provide subsidies for low income customers, and perform other programs that are not strictly associated with generation. It may well be desirable to retain these programs in some form. If these programs are unbundled, they might be funded through explicit surcharges or other fees on electricity consumption. The California PUC's latest proposals, for example, call for continuation of funding for these programs with

(38) Mitigation cost savings, which would be deducted from the otherwise recoverable stranded costs, could result from efforts to continue to use the stranded assets, such as by promoting additional demand or providing innovativ

(39) Notice, *supra* note 2, at 17,691 n. 225: The maximum stranded cost exposure " ... is the amount from which the competitive market value of the power that the customer would have purchased would be deducted to compute the amount of recoverable stranded costs (using the 'revenues lost' approach for calculating stranded costs ...

(40) The economic efficiency benefits of stranded cost recovery may also include less distortion in the choice of electricity suppliers and lower capital costs for future utility investments. If incumbent suppliers are burdened by regulatory costs that entrants do not bear, entrants may take sales from incumbents even if incumbents have lower production costs. If investors perceive that unrecovered stranded costs increase risk, they may penalize future utility investments by requiring a higher risk premium. A fairness argument can also be made for stranded cost recovery. See William J. Baumol and J. Sidak, *Transmission Pricing and Stranded Costs in the Electric Power Industry* 98-111 (1995). The economic costs of a program for stranded cost recovery are discussed below. The major effects of a program for stranded cost recovery are likely to be distributional. In this respect, note that if investors have already anticipated that customers would exit and that utilities would somehow recover their stranded costs even without formal regulations to require

(41) See, e.g., Richard Musgrave a

(42) The different approaches could also lead to different methods of payment, which themselves raise a concern about distortion. The amount of an excise charge that is eventually paid and the period of payment would vary based on future transmission usage. Firms may find it less costly, or less risky, to pay off a fixed sum than to carry an indeterminate liability for an indefinite period of time. Under

(43)" See discussion and sources cited in South Carolin

(44) Notice, *supra* note 2, at 17,705. FERC also proposes to adopt the rule that any exit fee in an existing wholesale contract will be considered sufficient to cover stranded costs for that customer. *Id.* at 17,693. FERC objectives also include permitting recovery of all stranded costs and recovering them from departing customers. This rule about exit fees could defeat those objectives. Under the traditional regulatory framework, a utility could reasonably expect that

new establishments in its service areas would become its customers. In that setting, the exit fee for departing customers might be designed to recover costs during the interim between a customer's exit and the arrival of others to replace it. But open-access transmission requirements are likely to reduce the probability that a high cost utility can attract new customers or increase the time it takes to do so. Thus exit fees that were set in accordance with

(45) Clifford Winston, Thomas Corsi, Curtis Grimm, and Carol Evans, *The Economic Effects of Surface Freight Deregulation* 16-27, 65 (1990), and John Ogur,

(46) One of the advantages of rate cap regulation over traditional, cost-based rate of return

(47) See David Sappington, *Designing Incentive Regulation*, 9 *Rev. Ind. Org.* 245 (1993); Price Caps and Incentive Regulation, (Michael Einhorn, ed., 1991); and William Lewellan and David Mauer, *Public Ut*

(48) If the stranded assets were divested, the market would determine the potential for mitigation. The net stranded cost to be recovered would be fixed, as the difference between the market price of the stranded assets and their historical cost in the utility's rate base. And the purchaser of the assets would have full incentives to operate them as efficiently as possible. Divestiture may not be a realistic option, though, because it would entail delays and administr

(49) This approach parallels the *ex ante* rate cap reductions used in the U.K.'s reform process to account for anticipated technological progress. See discussion and sources cited in South Carolina comment, *supra* note 3, at n. 124; see also M. E. Beesley and S. C. Littlechild, *The Regulation*

(50) Delays in utilization of open access may also result from opportunistic exemptions of capacity from the open access provisions. FERC may wish to examine the incentives and actions of public utilities to "lock in" exemptions from open access prior to the announcement of these proposals on July 11, 1994. Notice, *supra* note 2, at 17,690 nn. 221 and 223. To the extent that large blocks of capacity have been exempted from open access because of contracts recently signed, FERC

(52) One example is environmental improvements, whose benefits need not honor franchise territory boundaries. Another example may be reserve and peaking generation costs which, under "obligation to serve" regulation, reduce