

AN EVALUATION FOR NARUC
OF THE KEY ISSUES RAISED BY
THE FERC TRANSMISSION TASK FORCE REPORT

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Introduction

In October 1989, the Federal Energy Regulatory Commission's (FERC's) Transmission Task Force issued *The Transmission Task Force's Report to the Commission--Electricity Transmission: Realities, Theory and Policy Alternatives*. For brevity, we refer to it as the Task Force Report or simply the Report.

Shortly afterwards, the Committee on Electricity of the National Association of Regulatory Utility Commissioners (NARUC) and its Subcommittee on Strategic Issues asked The National Regulatory Research Institute (NRRI) to help the Committee evaluate the Report. The Committee, chaired by Commissioner William Badger of Maryland, said it would be most helpful to identify the key issues for NARUC raised by the Report. This would help the Committee to select issues for discussion at its 1990 meetings.

We presented a brief analysis of key issues at the NARUC Annual Convention in Boston in mid-November. There we stressed that the most significant issue for state commissions raised by the Report seems to be the likelihood and appropriateness of *state* actions to protect state advantages at the expense of interstate electricity market efficiency. The Subcommittee, chaired by Commissioner Ashley Brown of Ohio, agreed that this and related aspects of the federal-state jurisdiction question deserve special emphasis.

The Committee and Subcommittee then asked us to develop a document setting out key issues, which they could review during February 1990 in preparation for the NARUC Winter Meetings in Washington, D.C. This document is for that purpose.

This document stands alone. However, for brevity we have not provided detailed definitions of terms or an extensive explanation of the institutional, economic, and technical characteristics of the electric industry that underlie the transmission policy debate. This information is contained in two prior NRRI reports issued in August and September 1987: *Some Economic Principles for Pricing Wheeled Power* (NRRI-87-7), which contains a glossary of terms used in the debate, and *Non-technical Impediments to Power Transfers* (NRRI-87-8).



1. What the FERC Task Force Report Means for
State Regulatory Authorities

What the Report Is

The Task Force Report is important because it is the first report by federal policy makers in recent years treating the economic structure of the electric utility industry. It follows by about six months another important electric industry report by the Office of Technology Assessment. Together, the two reports say that changes in industry structure are both technically possible and economically desirable.

It is not a report by the Federal Energy Regulatory Commission itself, but a report to the Commission by a Task Force composed principally of one commissioner and three senior staff. It is not "official" FERC policy, though it shows the thinking of senior FERC policy makers. Further, though the Commission Chairman agreed with its findings, both this Chairman and the commissioner head of the Task Force, Martha Hesse and Charles Stalon, have since left the Commission. The senior staff policy makers remain.

The Task Force Report has drawn a lot of attention not only because it shows the thinking of policy makers but also because it is the first semi-official document to acknowledge the various informal but widely known proposals for reform of electric transmission access and pricing policy that have emerged in the last two years. As a result, though the Report is in many ways cautious and suggestive, it serves as a vehicle for focusing the debate on transmission issues. Also, it introduces into the debate a useful analytical framework.

Overall, the Report is an excellent contribution to the transmission policy debate. It is an attempt by one commissioner and a few senior staff of a NARUC-member agency to define the economic forces causing changes in the electric industry and to do a first-cut evaluation of the policy options open to this agency for coping with these changes. The analysts felt obliged, it seems, to examine mostly what FERC might do under existing federal law, rather than start off with what would amount to recommendations by this federal agency to the Congress for greater statutory authority.

FERC is exploring what it can do under existing law with what it calls its "conditioning authority," its ability to impose *quid pro quo* conditions on gas and electric utilities. Inevitably, imposing some of these conditions on electric transmission utilities will mean that FERC steps on state regulatory toes.

What the Report Says

One can think of the Report as having two parts. Pages 1-166 contain a very clear and insightful framing of the issues, and pages 167-187 present the conclusions of the Task Force.

The first part is mostly factual and analytical and contains little that state regulatory agencies would take issue with, in our opinion. It describes the electricity industry, its changes, the evolving role of the transmission function, and transmission costs. It says that economic forces are changing this industry and that FERC is reacting to change, not causing it. This first part also analyzes the economic theory of transmission, compares the many transmission policy proposals, and reduces them to three principal types. These are the Contract approach, the Planning approach, and the British approach.

The Report only loosely explains these terms when they are first used (p. 147), but their meanings are fairly clear from the context. The Contract approach would allow transmission owners and users voluntarily to enter into contracts for transmission services and would have provisions for assuring that access conditions and pricing terms are reasonable to both parties to the contract. Proposals of this type emphasize protection of the retail customers of the transmission owners from subsidizing wholesale transmission services. The Contract approach is favored by owners.

The Planning approach is favored by transmission users and emphasizes protection of their retail customers from always having to pay the highest transmission rates. It would require owners to provide service, often at embedded cost rates. Apparently, the name comes from the requirement that plans for system expansion would not be solely at the discretion of the owner but would include at least the needs of approved users and perhaps include the views of state and federal agencies, neighboring utilities, and other interested parties.

The British approach, which came out the best in the Task Force's rating scheme, seemingly has no advocates. The British plan would provide completely open access by a single national transmission system owner. While pricing is not yet well defined, all transmission users would pay the same rates for the same service; embedded costs might be recovered through access fees supplemented by spot pricing for recovery of operating costs.

The second part of the Task Force Report strongly suggests that the Commission consider adopting as a goal the encouragement of greater economic efficiency in the electricity industry by taking steps to open up the generation market. It concludes that current FERC transmission policy is inadequate for accommodating increased competition in power sales in light of the dominant market power of the utilities that own transmission facilities. It recommends no specific alternative policy.

However, it concludes that any new policy ought to have certain features if that policy is intended to allow independent suppliers of power to play a major role. Among these features are long-term firm transmission service at cost-based prices, arrangements for building new lines when needed, "sympathetic" treatment of stranded generation investment, and compensation for grid management services. Price-cap regulation of short-term transmission service is judged to be efficient.

Pros

The Report is one that, with one important exception, state commissions should find congenial with their own interests. The philosophy behind the Report supports the state-initiated programs of competitive bidding for lowering the costs of electric power supply. Unlike many other transmission reports, its goal is protection of the public interest, not the interests of particular "stakeholders" in the transmission debate. It reflects the thinking of people at a NARUC-member regulatory agency about how to protect the public interest--in their view, by lowering electricity costs over multiutility regions. They find that this requires some form of oversight of monopoly power in transmission systems.

These multiutility regions will be multistate regions in many cases. Just as several state utility commissions have instituted programs to lower electric costs statewide (sometimes to the chagrin of individual utilities),

the federal Task Force considered the need to lower electric costs in multistate regions as a possible FERC responsibility. It is a policy that the Task Force worries may be opposed by individual states as well as utilities. In thinking about how to eliminate state opposition, the authors of the Report advance a policy that favors wholesale customers to the disadvantage of retail customers--a policy not congenial with state commission interests.

Twin Scepters

The two powers that an economic regulator needs to be effective in controlling any monopoly industry are the power to set prices and the power to enforce the obligation to serve. These are the "twin scepters" of regulatory authority. The power to require service to all customers means little if a monopoly can set the price so high that no one wants it or can discriminate in pricing so that favored customers can afford to be large users while others cannot afford the service to which they are nominally entitled. On the other hand, pricing power alone is ineffective if the monopoly can pick and choose which customers to serve.

Service obligation has two aspects. A monopoly utility must be required not only to provide service to all comers with its existing facilities, but also to expand the capacity of its facilities as needed so as to serve growing load in its service territory. Otherwise, capacity shortages lead to capacity rationing, giving the utility the opportunity to argue for service to favored customers. Also, shortages increase the value of existing capacity, giving the utility the opportunity to argue for higher prices. The classic "textbook" strategy of an unregulated monopoly is to prevent others from offering the service, restrict capacity, and charge each customer as much as "the traffic will bear." When government grants an exclusive franchise to serve an area, it counters this strategy with the twin scepters, obligation to serve and price regulation. In principle, refusal to expand capacity could result in loss of the franchise.

In the case of electric power transmission, two factors complicate this simple textbook picture. Normally, the "textbook" utility wants to provide service because this is its source of revenue. But this is not necessarily

so for transmission service. Wheeling revenues are only mills per kilowatt-hour while power sales revenues are several cents. So any transmission-owning utility would be wise to use or withhold its transmission assets so as best to protect or enhance its generation service profits--from both retail and wholesale sales--within the regulatory rules of the game. The second complicating factor is that the regulatory rules of the game are at this time incomplete and confusing.

The FERC holds one scepter and the state commissions hold the other. Clearly the federal commission has authority over transmission service pricing. But, with narrow exceptions, Congress has always withheld from FERC the explicit authority to order interconnections among utilities or to order a utility to wheel power. There is no clear federal obligation to provide transmission service. (Some have argued that the FERC has this power implicitly.)

Some states claim the authority to order wheeling within the state using existing transmission facilities. Depending on whether the courts eventually uphold this claim, there may be a "regulatory vacuum" in that neither federal nor state authorities might have the power to enforce an obligation to provide transmission service. (Today's regulatory vacuum is reminiscent of the vacuum in regulatory authority over interstate power sales that led Congress to pass the Federal Power Act in 1935.) It is in this sense that the regulatory rules for overseeing monopoly behavior are incomplete.

State authorities have control over the obligation to expand transmission facilities. These agencies are the state utility commissions, as well as state and local transmission siting and licensing authorities, and state environmental protection agencies. They can require facility expansion for retail service and perhaps require stronger interties for reliability, economy power exchanges, firm power purchases, and competitive bidding. They can also block such expansion, a possibility that concerns the authors of the Task Force Report.

Cons

Realizing that the obligation-to-serve scepter is necessary for effective regulation, the Task Force had to choose among asking Congress for

this power, joining forces with the states, and going it alone. Apparently using the Report as a tool for exploring what the FERC might be able to do under its own current authority, the Task Force looks at going it alone. It considers using FERC's "conditioning authority" to create an obligation to serve, that is, to use existing transmission facilities and to expand their capacity so as to meet the needs of a more competitive electric generation market. However, by going it alone the Task Force now has to worry about state authorities blocking capacity expansion.

It would have been interesting if the Report had explored the federal-state cooperation option. Various ways of cooperating could have been examined. Cooperation would bring together the two scepters. In addition, FERC's pricing scepter can be made more effective by cooperation. This is because FERC acting alone has no real ability to reward or penalize utility stockholders for desirable or undesirable management behavior. Typically, any incentive return on transmission service allowed by the FERC translates into a lower retail revenue requirement allowed by the state commission; stockholders still earn the same state-approved return on rate base. Acting together, the federal and state commissions could effectively reward or penalize stockholders. Acting alone, the FERC can only penalize retail electric customers for undesirable utility management behavior. This is the option considered in the Report.

The Report concludes (pp. 185-187) by addressing the federal-state jurisdictional issue directly. The Task Force acknowledges the importance of allowing states flexibility in defining transmission policies. But it worries that, if global cost minimization throughout the grid becomes FERC policy, local utilities and state agencies may team up to minimize local costs and so frustrate federal goals. Hence, the Task Force considers using FERC's conditioning power to gain leverage over transmission construction. It would approve firm transmission service contracts only if they contain a provision that, if capacity is inadequate *for any reason*, economy trades that benefit retail customers must be curtailed. In setting out the case for controlling a utility's monopoly power, the Report adds (p. 177):

The argument applies equally well to a utility and to its state commission. In many instances, a utility's core customers may benefit from the monopoly position of the utility. Furthermore, the state commission controls how benefits are shared between stockholders and

native ratepayers in its policies governing the crediting to retail customers of coordination revenues in the wholesale market. Consequently, a state commission's interest in creating or preserving a utility's market power over transmission may be as strong as the utility's itself.

Whether this conclusion is valid and, if so, whether it requires federal correction is perhaps the most significant issue for state commissioners raised by the Task Force Report.

Issues

The remainder of this document presents transmission-related issues raised by the Task Force Report. We give a brief analysis of each issue, including some background and policy choices. Not all reasonable policy choices are listed, just the principal ones under active discussion.

The federal-state jurisdictional issue is presented first and is treated at greater length than the others. The other issues are grouped into three categories: goals, means, and laws.

The first set of issues concerns the appropriate goals of federal and state commissions' transmission policies and how to resolve conflicts among their various goals. The next set of issues deals with some specific and current tough questions about means of achieving regulatory goals. Legal issues, other than the jurisdictional question, are presented last.

We have tried to be selective rather than comprehensive in including issues. Since the discussion time of the Committee on Electricity is limited, treating several dozen issues would be of little use and would probably have considerable redundancy anyway. Some important issues, such as how to maintain system reliability, are not included. An issue is not included if it was treated at length in a prior NRRI report, if it was not raised in the Task Force Report, if it is not likely (in our judgement) to be selected for Committee discussion, or if it is simply not current. The issues that are presented are among the principal issues that are now debated in the several transmission policy forums.

2. Federal and State Jurisdiction over Electric Transmission

Question: Is it true that state commissions would act parochially to protect state interests? What new policies can federal and state regulators adopt to regulate electric transmission service? How might various approaches lead to cooperation or conflict between the FERC and the state commissions?

Background: Many state commissions, particularly those in New England and the West, are not parochial but are concerned about regional reliability and costs. These commissions use regional forums to discuss issues of common concern. This state commission consideration of regional concerns shows that these commissions are capable of looking beyond their state borders and are not necessarily interested in maintaining a utility's market power over transmission to the detriment of out-of-state customers.

Nevertheless, the division of transmission policy jurisdiction between the state commissions and the FERC is such that it can naturally lead to conflict.

Currently the FERC has sole jurisdiction over pricing transmission services in interstate commerce. With the exceptions of transmission services taking place in the ERCOT region in Texas, and in the states of Alaska and Hawaii, all nonretail transmission services are in interstate commerce.

The FERC also has sole jurisdiction to set the terms and conditions of the transmission service. However, the FERC does not have any effective power to order wheeling. (FERC's power to order wheeling is substantially limited by the Federal Power Act (FPA) sections 211 and 212.)

Many state commissions, on the other hand, on their own authority have ordered electric utilities to provide transmission services to third-party generators. Even if the transaction ordered takes place entirely in one state and there is little or no measurable impact on the interstate transmission system, state commissions still cannot set the price, terms, and conditions of the transmission service. These are under FERC jurisdiction.

States provide vertically integrated electric utilities with franchise areas within which a utility has an obligation to serve its retail customers. To help enforce this obligation to serve retail customers, state commissions have authority to review (and sometimes to order) expansion of the utility's capacity. This authority varies somewhat from state to state, but includes certificates of need, or convenience and necessity, and siting authority over the utility's transmission facilities. State commissions do not necessarily consider out-of-state benefits of a transmission line in assessing whether a transmission line is needed. Because siting and determinations of need typically focus only on intrastate benefits and costs, some contend that transmission lines are not likely to be built to meet the needs of an interstate bulk power market.

The cost of a transmission facility typically goes into the utility's retail rate base and is paid for by retail customers as the facility is depreciated. There is no mechanism to compensate states where the siting of a transmission line justified by out-of-state benefits has adverse local consequences and costs. Retail ratepayers are "compensated" for wholesale transmission services by a reduction in the retail revenue requirement equal to the revenue that the utility receives for these services.

Strategic obstructions to an efficient, bulk power market are also possible. For example, a utility may have an abundance of low-cost power available, while other utilities in the region have high-cost power. The utility might find it in its interest not to sell the power in the bulk power market, but to reserve it for local retail customers. Yet, the most efficient transactions might be in the bulk power market.

The FERC Task Force is concerned that strategically located or situated utilities and state commissions alike might find it in their interest not to expand transmission capacity. The Task Force has suggested that one way to overcome the obstacle is to curtail the use of transmission lines for coordination and to give priority to demands for long-term transmission service. This would have the effect of taking away any gains the utility and its retail customers might have from coordination trades. It might also jeopardize the utility's ability to meet its obligation to serve its retail customers at the lowest, reasonable costs. There is potential jurisdictional conflict between the FERC and state commissions, which makes the formulation of a cooperative transmission service policy difficult.

Policy Choices: Federal and state regulators face a number of policy choices that can either lead to greater jurisdictional conflict or to collaboration and cooperation. Where jurisdiction is divided, collaboration and cooperation between federal and state agencies can lead to a well reasoned, coherent regulatory policy that is in the public interest. However, great care must be taken in choosing among alternate regulatory policies; otherwise, the potential exists for greater jurisdictional conflict that frustrates the public interest.

One choice concerns the FERC having sole responsibility for determining the prices, terms, and conditions of transmission service that takes place entirely within one state with little or no effect on interstate commerce. Commissioner Ashley Brown (Ohio) and others have suggested that such a policy is not sensible, given the emerging market structure. Many wholesale power sales and transmission services are provided entirely within one state, with little or no effect on the backbone transmission lines that affect interstate commerce. If there is no potential for parochial state interests to affect interstate commerce in the bulk power market, a more sensible division of jurisdiction may be appropriate. One way would be for the states to regulate all bulk power sales and transmission services occurring within one state, and for the FERC to regulate such sales and services when they occur between parties located in two or more states. Such a redrawing of jurisdictions to minimize conflicts would require an Act of Congress.

Another policy choice is for the FERC to use its "conditioning" powers to assert jurisdiction over transmission access and to preempt the states. In spite of FPA sections 211 and 212, the Task Force explores a policy option that would allow utilities voluntarily providing open access greater flexibility in the pricing of nonfirm transmission services. Such an incentive system indeed may increase the degree to which utilities voluntarily provide access to their transmission lines. However, it is not clear that the FERC can do indirectly what it cannot do directly, that is, order a utility to provide transmission service. Further, the incentive that the FERC could offer may be insufficient for those utilities with the greatest market power because of the strategic location of their transmission lines. As noted

by the Task Force, market power can be acquired simply by refusing to expand transmission capacity to meet the needs of growing bulk power and transmission service markets.

If the federal courts do not uphold the incentive approach, for the FERC to have previously preempted the state's right to order open access would ill serve the public interest. While federal preemption would increase the potential for interjurisdictional conflict, the FERC might choose instead to design its incentive system so that a state commission's authority to order open access is not challenged. Then, state commissions could collaborate with the FERC in designing a new regulatory framework within which efficient bulk power sales can take place.

The Task Force evidently believes that putting short-term coordination sales at risk gives both the utility and the state commission an incentive to expand the transmission system as needed. But, coordination sales help the utility to meet its franchise obligation to serve its own retail customers at the lowest costs. The Task Force policy, if implemented by the FERC, would set state and federal objectives at odds.

This conflict over jurisdictional goals may be avoidable. Other alternatives can achieve the same ends.

One such alternative is to transfer the jurisdiction for siting interstate transmission lines to the FERC, though there are several difficulties with this. First, it is unclear what constitutes an interstate transmission line as opposed to an intrastate line. Since the transmission system operates as an integrated whole, expansion of a short, but strategically located transmission line within

a single state may have as much effect on interstate commerce as a new interstate line spanning several states. A major disadvantage of this approach is that local concerns might not receive adequate consideration. There may be legitimate reasons not to build a transmission line, or there may be alternative ways of siting the transmission line to mitigate adverse local effects. Keeping these decisions at the local level minimizes such adverse effects. Also, transferring jurisdiction over the siting of interstate transmission lines would require an Act of Congress.

Another alternative is for the state regulators to seek enactment of their own legislation that would make certification and siting more uniform. The myriad of state requirements for certification and siting makes construction of multistate transmission lines extremely difficult. The delays that result from dealing with several different state requirements can increase the cost of a project and make an otherwise justified project uneconomical.

A uniform or model state statute for certification of need and siting would serve two purposes. It could reduce costs and delays. It could include a provision in state law that regional as well as local benefits can be counted for balancing benefits against costs.

Still another approach would be to explore more cooperative approaches to solving problems that arise in siting multistate transmission lines. One such cooperative approach would be for state and federal regulators to petition the Congress for legislation that would permit federal-state joint boards to solve conflicts arising during state certification and siting of

multistate transmission lines. Representatives from the governments of the affected states should be included, of course. Federal representatives could either participate fully or play a tie-breaker role.

3. ISSUES RELATED TO GOALS

- Selecting the Region for Cost Minimization
- Providing Transmission for Wholesale Service
- Conflicts among Goals
- Planning Transmission Systems

Issue: Selecting the Region for Cost Minimization

Questions: Is multistate regional cost minimization a proper federal commission goal? Is multiutility statewide cost minimization a proper state commission goal? Is service-area cost minimization for its retail customers a proper utility goal? If the answer to all three questions above is "yes," how should conflicts among these goals be resolved?

Background: When two utility service areas merge or agree to pool their resources, their combined costs of providing service are expected to be lower than the sum of their separate costs. Often though, a utility that has low cost assets or access to low cost fuel does not want to merge. This is because pricing on the basis of the merged companies' average cost raises prices in one service area while lowering costs in another. Even though the total cost is lower, the local cost of electricity can increase.

Open transmission access would have much the same effect as a merger in this regard. It would lower costs overall, but there would be winners and losers. Potential "loser" utilities oppose mergers, forced pooling, and mandatory transmission access.

State regulators may have a policy of encouraging such policies as statewide pooling, open access, or economy power-brokering in order to minimize the statewide cost of electricity. Such a policy may be opposed by any whose costs increase as a result of the policy, of course, but statewide cost minimization may prevail as a higher goal than local cost minimization.

The FERC Task Report finds that existing FERC transmission policy is inadequate to lower electric costs in broad

multistate regions. The authors worry about utility and state resistance to multistate cost minimization, but clearly they view such a policy as a proper candidate federal goal. The Report finds (pp. 66-67), "There is a tension between the incentives to trade between geographically dispersed electricity markets and the current regulation of the system as separate franchised territories."

This raises the issues of whether utilities should prevail in protecting local customer advantages, whether states should prevail in minimizing costs statewide at the expense of local advantages, and whether federal regulators should pursue a policy of multistate cost minimization--a policy not previously considered part of FERC's goals.

Policy Choices: There are policy choices for both federal and state policy makers.

At the federal level, the policy choice is whether to adopt multistate cost minimization as a goal of federal regulation. Until recently, it has not been considered a federal objective and is not explicitly in federal statutes. However, any regulator can argue that the goal is implicit in the public interest standard and perhaps in accordance with PURPA requirements for considering efficiency and conservation in electricity regulation.

The term "multistate cost minimization" is ours; the goal could just as well be called economic efficiency, integrated or least-cost resource planning, providing service at minimal cost, or promoting effective competition in the industry.

It is by no means clear that the five FERC commissioners at the beginning of 1990 support this extension of FERC's objectives. So the policy choice remains to be made.

Action by the Congress in support of competitive bidding, especially strong support for PUHCA reform, is likely to be a signal that lawmakers favor opening up the industry. It could also be a signal to the FERC that transmission corridors should be opened up so that potential bidders are less constrained by distance.

For state policy makers, a policy choice is whether to support or oppose a FERC goal, should one develop, of multistate, regional cost minimization. As discussed elsewhere in this document, the states' posture may well depend on whether FERC's approach to attaining this goal is one of cooperation or confrontation with state authorities.

Whatever the FERC approach, states may choose to support any FERC long-distance cost minimization initiative on efficiency grounds, despite potential jurisdictional difficulties. This is a position informally expressed by many NARUC Electricity Committee members in the mid-1980s when a major concern of members was to reduce large interregional and intraregional power cost differences. In this view, there is nothing special about state boundaries for defining electric industry cost minimization regions.

On the other hand, states may choose to support stronger state-level programs of cost minimization because of the degree of control allowed to state government officials and industry leaders to pursue such programs as state energy self-sufficiency and state economic development.

Still another option for both federal and state policy makers is to reaffirm support for the utility franchise system. In this case, utility managers are responsible, subject to state commission oversight, for minimizing costs in their own service territories. Except insofar as available low-cost purchased power should be obtained if it is the prudent choice, utilities would be under no federal or state obligation to trade or transmit power for cost minimization across a larger area.

Issue: Providing Transmission for Wholesale Service

Question: Should utilities be denied the use of their own transmission property (acquired under state franchise and eminent domain laws) for lowering retail rates if a state constrains transmission capacity expansion for some good reason?

Background: The Task Force Report suggests (pp. 176-8, 185-8) that utilities should be denied use of their own transmission facilities if a state does not permit transmission capacity expansion, even if for a proper reason. The Report suggests that with the expansion of electricity markets beyond state boundaries, state interests can be reasonably expected to create incentives to block interstate trade, for example, by limiting the transfer capability of transmission facilities transporting power to or importing power from a neighboring state.

The Task Force acknowledges that there may be some legitimate reason for refusing to allow expansion of transmission lines, such as a poor cost-benefit result or environmental and health concerns. The Task Force Report suggests that an attempt by the FERC to distinguish between appropriate reasons and anticompetitive motives would be difficult, resulting in never-ending regulatory hearings, litigation, and appeals.

Instead, the Task Force suggests that, under the Contract approach, each transmission owner would be required to curtail its own coordination trades to the extent necessary to accommodate requests for firm transmission service. In a current case involving transmission service by the Public Service Company of Indiana, the FERC Staff has named this approach "the no-fault concept of market power."

Under this proposal, a utility cannot always use its transmission facilities, acquired under state franchise and eminent domain laws, to meet state objectives. Nor can it always use these facilities, supported ultimately by retail revenues, for coordination trades that lower retail rates.

Policy Choices: Three basic policy choices are: maintain the status quo, adopt the FERC Task Force proposal, and design a new collaborative procedure.

If the status quo is maintained, individual states would be responsible for siting of new transmission facilities. There would be no federally mandated penalty affecting local ratepayers if a state were to deny transmission facility expansion for any reason. However, under the status quo many states' balancing of the benefits and costs of new facilities does not include the out-of-state benefits that can result from a more efficient interstate bulk power market. Thus, a state can refuse to site a facility for which out-of-state benefits exceed intrastate costs.

The Task Force proposal, while not directly preempting state authority, could adversely affect retail ratepayers whose interests the state commission must protect. Further, the existing transmission system was acquired under local franchise and eminent domain laws and was designed to serve local customers. Local customers pay for the transmission lines as they pay for the depreciation of the line over its life.

A third option is to design a new, more collaborative procedure for determining the need for and siting of new or expanded transmission facilities. One such procedure, (presented in the NRRI report, *Non-Technical Impediments*

to *Power Transfers*) suggests that state commissions petition Congress for legislation permitting joint federal-state boards to solve conflicts arising during state certification and siting of multistate transmission facilities. Such joint boards could be a collaborative forum to address the concerns of states troubled by a proposed transmission line beneficial to the region as a whole. Representatives from the affected states should be included and predominate. At such a forum, states could negotiate and reach agreements advancing the public interest without creating an uncompensated burden for any state.

Issue: Conflicts among Goals

Question: How should conflicts among cost-minimization goals, environmental goals, and concerns about transmission health effects be resolved? And by whom?

Background: All policy making involves trade-offs among various legitimate societal goals. At least three goals are of concern in transmission line siting and licensing.

First, electricity cost minimization at the utility, state, or regional level is a primary concern of utilities, state regulators and, as discussed before, perhaps of federal regulators also.

Second, environmental protection, together with land-use planning, is a goal pursued by state siting authorities in certifying new lines. States have a legitimate environmental interest in avoiding a proliferation of unsightly transmission lines of various voltages in a crisscross network of rights-of-way.

Third, protecting the public from possible electromagnetic field (EMF) health effects is emerging as a state priority. Although it appears that definitive medical evidence of adverse effects is lacking, the public policy debate is growing and cannot be ignored by state decision-makers.

Appropriate economy of system expansion requires the state sometimes to say "no." This would be true especially if a multiplicity of lines were being demanded not only by the large utilities, but also by small IOUs, munis, coops, IPPs, and large electricity consumers. State authorities may have to deny some transmission line construction requests based on line location or may have to consider an

extended series of appeals of their decisions. Such denial or delay could obstruct, for example, an IPP's bid to supply power.

The FERC Task Force Report finds that it would be too difficult for FERC to distinguish good and bad motives for not expanding capacity: "If the Commission attempts such evaluations and tries to distinguish between good and bad motivations, the result is likely to be never-ending regulatory hearings and litigation" (p. 177). So under the Contract model, the Task Force would act as if all such motives were bad.

The intent of this is to assert federal over state authority in order to prevent a monopoly from impeding economic efficiency in the bulk power market. The effect, however, would be to elevate one goal, electricity cost minimization, to a higher level of importance than two other goals, environmental protection and public safety.

Total cost minimization ought to take precedence over electricity cost minimization, but transmission-related environmental and health costs (those not internalized in the price of transmission services) are not accounted for under the procedure suggested in the Task Force Report.

Policy Choices: The simplest policy choice is for the FERC to trust that state siting authorities are doing their job honestly and in good faith. Yet, the Report worries that "construction of some interstate transmission lines might be blocked for strategic purposes using environmental concerns as the ostensible reason, particularly if the line is intended to benefit out-of-state parties" (p. 151).

Whether or not strategic blocking is likely, a serious policy problem may emerge for multistate transmission line

siting, as suggested in this quotation. When a state siting agency applies a legitimate state-level cost-benefit test in siting a multistate line, it may find in good faith that the line should not be built because state costs exceed state benefits.

Policy options for dealing with this problem include some form of federal preemption, multistate regional cooperation for long-term mutual benefit (as in New England), or developing a way for the state experiencing the costs to obtain a greater share of the benefits.

Some arm of government must examine trade-offs among the three goals without giving one goal a special kind of "veto status." States may worry that federal efficiency goals may unduly override environment/health concerns, and FERC may worry that state environmental/health goals may override efficiency concerns.

If the arm of government examining the trade-offs is the FERC, this agency could be forced to give greater weight to the environmental impacts of its decisions. But no one--least of all FERC commissioners--really wants to see this federal agency become the forum for local transmission line siting decisions.

Issue: Planning Transmission Systems

Question: Should transmission lines and routes be planned by utilities for their own retail and contractual needs or should there be some form of regional planning that optimizes grid expansion for the region's future needs while minimizing overall environmental impacts?

Background: Historically, electric utilities have planned transmission lines and selected line routes for their own needs. The need for each to move power within its own service territory has been primary, and the need to tie into neighboring systems has been secondary. With a few exceptions, lines have not been built to accommodate the needs of others for long distance power transfers.

The Task Force Report addresses the use and expansion of transmission systems to meet others' needs. Two general approaches to meeting these needs are identified. In the Contract approach, the transmission-providing utility would add the needs identified in its transmission service contracts to its own previously identified transmission needs for retail service and for reliability tie lines. This gives a "total need" upon which the utility would base its transmission facility plans.

The Joint Planning/Joint Ownership approach (a term quickly shortened by the Task Force to the "Planning model"), which is not well defined but represents a cluster of quite distinct proposals, would apparently provide transmission system planning through "some kind of centrally enforced cooperation" (p. 159).

Policy Choices: At issue is whether a quasi-market approach (the Contract model) or a central planning approach (the Planning model) would work better in achieving economy in transmission

system design. (Here, by "economy" we mean the use of limited transmission corridor space to its best advantage.)

The Contract approach has the advantage that any candidate line must pass a kind of "market test" in that typically the party wanting the line must enter a binding contractual agreement to pay for the line if built. This approach, however, is open to the criticism that lines in any one service territory will be planned, sized, and located only to meet the immediate needs--including contract requirements--of a single utility.

But by building higher voltage lines, large unit-cost savings (in dollars per megawatt-mile) can be achieved and, under appropriate circumstances, the number of transmission rights-of-way can be reduced. One such circumstance for realizing savings is that the current and near-term transmission needs of all parties in a region be considered together in planning the optimal grid expansion.

The Planning approach promises to be superior by combining in some way the needs of many parties.

On the other hand, central planning of any large enterprise is notorious for working well in theory and poorly in practice. Planning by a large committee is subject to the too-many-cooks syndrome. The result may be costly excess capacity or capacity located so as to serve future generation sites that are not eventually developed.

4. ISSUES RELATED TO MEANS

- Transmission Service Incentives and Penalties
- Paying for Transmission System Growth
- Residual Rights to Transmission Upgrades
- Risk and Reward in Transmission Investments
- Resale of Transmission Capacity
- Third-party Costs and Benefits

Issue: Transmission Service Incentives and Penalties

Questions: Are there ways for FERC to target transmission-access-related incentives and penalties to utility stockholders instead of to utility retail customers? What can be the role of state commissions in determining who will receive the incentives and penalties?

Background: Suppose the FERC successfully enforces a Contract-type approach that prevents the transmission-providing utility from engaging in economy transactions. The utility's costs increase as a result. A firm in a competitive industry would truly be penalized by a cost increase because it would lose market share and its earnings would decrease, but a regulated utility's earnings on rate base are held harmless by the state commission, and the increased operating expenses are passed through to captive retail ratepayers. The utility's management and stockholders are unaffected.

The FERC may try to set prices for transmission services that include a rate-of-return incentive to encourage "good" (economically efficient) wheeling. This Commission may also want to penalize utilities that constrain transmission capacity.

Current state regulatory practices can make any FERC incentive or penalty for transmission service ineffective in inducing a utility to provide economically efficient transmission. If FERC allows a transmission price that includes an incentive profit for providing the transmission service, the amount of the incentive is usually counted by the state commission as revenue toward the total allowed return on the rate base of the transmission-providing utility. Then, the incentive

profit merely lowers retail rates. This limits the FERC's ability to encourage economically efficient transmission practices or discourage inefficient practices.

Policy Choices: No action. One option is for the FERC not to try to use incentives or penalties to accomplish its goals. This option, in effect, is the status quo and requires no change from current policies.

Cooperative state action. From an economic efficiency standpoint, however, "no action" is not an attractive option unless state agencies step in to encourage efficiency in the bulk power market over large regions. However, the changing power market, with increasing competition in electricity generation over ever larger areas, may make the necessary state cooperation impractical.

Federal action. The FERC could adopt the Task Force's strategy, preventing coordination transactions. Further, it could explore rate-of-return incentives and penalties. It could try to prevent state commissions from passing through the incentives and penalties in FERC set rates to retail ratepayers.

The authority for FERC to do this could come from two sources. Congress could pass legislation, but then it could pass more direct legislation giving the FERC authority over obligation to serve in transmission. Alternatively, the FERC could act and receive the authority from the courts if it withstands the likely court challenges to its action.

Cooperative state and federal action. State commissions and the FERC can inform each other of the procedures used to determine appropriate prices for transmission services

and the status of current cases. The agreed-upon arrangement between the two (or more) parties would have to be legally binding as well as credible to induce the utility to act in the desired way. In order for this option to work, there would have to be considerably more communication and sharing of information between federal and state authorities than currently happens. This includes information on the specific methods, assumptions, and data used to determine rates. This exchange of information could take place in either formal or informal arrangements between the states and the FERC. Formal arrangements may be a self-imposed requirement to provide written notification of an action and specific details on how the decision is arrived at. Informal arrangements may include periodic meetings to discuss general industry trends, regulatory goals, and approaches to meeting common goals.

Issue: Paying for Transmission System Growth

Question: Is it possible to protect economically the retail customers of transmission-providing utilities without discriminating economically against the retail customers of transmission-dependent utilities?

Background: In the Contract model discussed in the Task Force Report, transmission providers might charge incremental cost-based rates for firm transmission, including for requirement customers that choose to shop around for power. Planning-model approaches generally allow all parties to pay embedded cost-based prices for transmission.

Transmission-providing utilities include large investor-owned utilities (IOUs) and federal power authorities. Transmission-dependent utilities include many smaller IOUs, municipal and other public power utilities, and rural cooperatives. Other transmission-dependent entities are independent power producers that need to transmit power to make a sale.

Some transmission-dependent utilities want to shop around for power, but want to pay an embedded cost rate for use of the host utility's transmission grid to import the power. They argue that, like the retail customers of the transmission-owning utility, they have contributed toward the payment for the existing system over many years and are entitled to continue receiving transmission service at embedded cost rates.

Some transmission-providing utilities want to provide this transmission service at a higher price. They argue that the existing system is for retail and loyal requirement customers and any growth in grid size should be paid for by charging incremental cost rates to the wholesale

customer "on the margin," that is, the former requirements customer that wants to shop around. Further, for every buyer there is a seller. The seller has no claim on the use of the host utility's transmission system. The seller, often a new power-producing entity, is truly on the margin, it is argued, and ought to pay incremental cost prices for transmission service.

Transmission-dependent utilities view incremental cost pricing as discriminatory pricing. Their retail ratepayers would pay more than the retail ratepayers of the transmission-providing utilities for similar transmission service.

Transmission-providing utilities contend that their retail ratepayers bear the expense and risk of building transmission facilities. Hence, prices for transmission services to other utilities should be higher than the (implicit) price of retail transmission services. The transmission-providing utility's retail ratepayers should be held harmless, they contend, paying an embedded cost rate for transmission service that does not include the rolled-in cost of new facilities constructed to serve wholesale customers. To accomplish this, wholesale transmission service would be priced at incremental cost. This is similar to a policy of setting higher rates for wholesale generation than for retail--the wholesale customer buys from the last unit on line and is "on the margin."

Policy Choices: An advantage of incremental cost-based pricing is that it would help encourage long-term efficiency in the construction of transmission capacity (assuming that incremental prices are a reasonable approximation for long-run marginal cost).

A disadvantage of incremental cost-based pricing is that it is, in one sense at least, discriminatory. The transmission-owning utility's core customers would pay embedded cost-based prices for transmission services (bundled with generation service) while the transmission-dependent utility's customers would pay a higher incremental cost.

Further, captive wholesale customers would continue to pay embedded cost prices for transmission. This introduces a bias in the choice of generation suppliers: "If you buy from me your transmission cost is low, but if you buy from anyone else it's high."

An advantage of embedded cost pricing for all is that it would avoid these kinds of price discrimination. Also, it is easier to assign each party a share of the average cost than to determine unambiguously the incremental costs imposed by various parties on a commonly used system.

A disadvantage of embedded cost pricing for all is that rates for the retail customers of the transmission-owning utility would be higher than if wholesale users were charged the incremental cost of their transmission services. This assumes that these services require an expansion of transmission capacity not needed to meet retail needs and a higher-than-embedded cost for new facilities.

Part of the policy choice is whether this issue should be decided in the same way for old and new wholesale transmission customers.

Old wholesale customers of a transmission-providing utility include distribution utilities, such as municipal systems that have been receiving transmission services as

long as retail customers have. Since they have been contributing to the revenues in support of transmission assets for a long time, should they be required to pay a high transmission price based on incremental cost? Or should they be treated differently from the truly new transmission customer who has not made any previous use of the grid or contributed to its support?

Issue: Residual Rights to Transmission Upgrades

Question: If a wholesale transmission user (independent power producer or transmission-dependent utility) does pay incremental cost, should it continue to pay higher rates indefinitely?

Background: Suppose the previous issue is decided so that those who receive wholesale transmission service must pay the incremental cost of system expansion to meet their need for transmission capacity. They sign a contract with the transmission-provider, under which they pay the full cost of the transmission system upgrade undertaken to meet their needs. Having fully paid for the new facility during the term of the contract, what rate must they pay under the next contract if they want to continue receiving transmission service?

In some versions of the Contract model the transmission provider owns the facility, and the rights to its use would revert to the providers' retail customers. This places the wholesale customer "on the margin" again. During the next contract period, he must pay for any system expansion that would not have been necessary during this period if his needs ended when his contract terminated. In this view, the wholesale customer is on the margin forever.

Not all versions of the Contract model follow this view. Some would recover the incremental cost during the first contract period, then charge an embedded-cost rate in follow-on contracts for use of the same facilities.

In the Planning model, the wholesale transmission customer usually pays average embedded-cost rates at all times.

Some versions of the Planning model would allow those with transmission needs to "buy into" the system. The transmission "customer" would pay the incremental cost (that is, the total capital cost of the new facility needed for his service) and would then own the new facility, even if the host utility carried out the construction. As owner, after paying the host utility the incremental cost of facility construction during some initial contract period, he would have the rights to its future use, including the right to charge the host utility for its use and the right to rent the capacity under contract to other users.

Policy Choices:

One option is to continue to charge incremental cost prices indefinitely. The rationale for this is that a utility's retail ratepayers should always come first. They should have first rights to the use of any of the company's facilities and should be held harmless by charging others for the incremental costs they impose on the system. If wholesale customers are not considered to be on the margin in the long run, retail rates will be higher than they would be otherwise.

Further, a wholesale transmission market will continue to be more efficient if incremental cost-based prices continue to be charged to wholesale customers.

Another option, taking as given that the first contract recoups the incremental cost of a new facility, is to allow embedded cost pricing thereafter. In the interest of equity, all users of the system would pay the same price for the same transmission service. The problem of bias, with the host utility's power looking cheaper because of a lower transmission rate, would be eliminated.

Still another option, as mentioned, is to provide a means for wholesale customers to "buy into" the system. Then, in the future the smaller utilities would enjoy the same benefits as the larger ones.

Issue: Risk and Reward in Transmission Investments

Questions: If utilities assume an obligation to provide long-term transmission services (voluntarily or otherwise), how can an appropriate balance between the accompanying risks and any rewards or losses be achieved? Who should strike the balance?

Background: Ordinarily, the investment risk taker also receives the reward or loss that accrues from that investment. In the case of building transmission facilities for wheeling purposes, however, the wheeler may assume the risk, but the sellers and buyers of power will earn the reward. Either the wheeler or its retail customers may absorb the loss if one occurs.

This could happen if the FERC cannot provide the utility with an incentive to wheel or if any incentive provided is treated by states as an offset to the revenue requirement, as discussed before. The utility's stockholders will most likely take the loss on a facility that turns out not to be useful if the state determines that the investment is not needed for retail service. Of course, retail ratepayers will experience higher rates if the facility is included in the retail rate base.

Transmission facilities may be risky, for example, if the economics that drives them arises from regional fuel price differences that may not last until the capital cost can be recovered or until an alternative use for the facility is found.

Currently, there is no authority to force a utility to invest in transmission facilities, except as part of its obligation to serve retail customers. This combination of

lack of authority and lack of incentive may limit transmission construction for meeting the needs of the bulk power market.

Policy Choices: There are several ways to try ensuring that risk and reward or loss are allocated appropriately to the party taking the risk of investing in new transmission construction.

(1) An individual state can, unilaterally, guarantee the return on investment, regardless of whether there is a gain or loss, as long as it considers the investment to be useful for retail needs in some cooperative regional framework. The option would work well with agreements made among utilities that are under one state commission's authority, but would be limited beyond the borders of that state.

(2) The FERC could try to decide how risk and reward (or loss) would be apportioned. It is in a position to determine the appropriate distribution of risk among contracting parties in a multistate region. It already has pricing and limited access authority over interstate transmission transactions. Absent changes in federal law, however, the FERC would need the cooperation of the states to assign the risk in transmission agreements and make it stick.

There is a difficulty with the FERC acting alone. Suppose the Commission creates, in effect, an obligation to provide wholesale transmission service and requires the construction of a new line that ultimately proves to be an economic failure. The Commission should be in a position to guarantee a return on that failed investment if it is to create the service obligation. This might require separate wholesale and retail rate bases, for example,

with the FERC responsible for recovery of investment in the former from wholesale customers and state commissions responsible for recovery of investment in the latter from retail customers. The effect of this would be to shield retail customers from risks that others choose to assume.

The difficulty of implementing this idea is, of course, that separating the integrated electric transmission system into retail-related and wholesale-related assets is probably not possible.

(3) Interregional agreements among utilities could be used to spread the risk and rewards of transmission investment among the participating utilities in a multistate region. In such an arrangement, state commissions would work together with the utilities to form agreements on terms and conditions for long-term binding contracts.

An unresolved question is whether such agreements, if limited to transmission construction, would constitute a power pool. Under PURPA section 205, power pooling agreements are under FERC jurisdiction. However, this statute and its Conference Report do not clearly define whether such an arrangement would be a power pool.

The arrangement could be either voluntary or compulsory. Arrangements among states that force utilities to comply may require Congressional as well as state legislative approval.

(4) The best solution to allocating the risk and rewards or losses might be some combination of all three of the above options. Federal authorities can see beyond the individual state's interests and fashion policies and procedures that motivate utilities to provide an efficient system overall. Cooperation with state commissions can

ensure that the utility's shareholders, if they assume the risk of an investment, are allowed to collect the rewards or are assessed the losses. State authorities can regulate the utility's investments and the return it receives on those investments.

The two authorities must work in tandem in order to see that risk and reward are properly matched.

Issue: Resale of Transmission Capacity

Question: Is there a way to permit reassignment of transmission contract capacity, other than on a point-to-point basis, without threatening system reliability?

Background: Transmission-providing utilities maintain that they can provide facilities for sales from point A to B. Transfer of capacity rights to a third party cannot be allowed, they say, without jeopardizing system reliability, unless the power is moved between the same points A and B. For this reason, these utilities oppose provisions for resale of transmission capacity in service contracts.

The Task Force Report suggests that allowing the resale of transmission capacity would mitigate the market power of transmission-owning utilities. The Report argues that, in the interest of fostering a more competitive electricity market, resale can provide a means to prevent the "transmission monopolist" from exercising market power.

To the Task Force, the most compelling reason for requiring resale options in contracts may simply be its ease of implementation and oversight together with the intended good effect on bulk power prices and market power. The Task Force Report (p. 81) says that "it is likely to be easier for the Commission to achieve efficient results by setting in motion a process--secondary markets--that indirectly controls short-term transmission prices than by regulating such prices directly."

Allowing the resale of transmission capacity is thought to promote greater efficiency in the generation market. The Report points out (p. 79) that, a perfect secondary market, "could be expected to check completely the

transmission owner's market power over short-term transmission service with little, if any, inefficiency in generator usage." As the secondary market becomes more imperfect, the transmission monopolist's ability to price discriminate increases and leads to more inefficiency in the generation market. (Having no secondary market allows the transmission monopolist to practice unrestrained price discrimination in the absence of regulation and leads to generating plants being used efficiently again, as in the case of perfect secondary markets.)

Policy Choices: Resale arrangements in contracts would not be necessary to control market power if there were mandatory access, as in most Planning model approaches.

Under some Contract-model approaches, requiring resale of transmission capacity may be desirable to foster the emerging competition in the generation of electric power. Independent power producers, cogenerators, small power producers, power brokers, and transmission-dependent utilities would be helped by resale provisions. Although the development of an effective secondary market for transmission capacity alone is not sufficient to ensure an efficient generation market, it can be an important component in its development.

Nevertheless, there are real technical difficulties with resale. If resold transmission capacity carries power from the same source to the same load (A to B, as mentioned above), there is really no resale at all. It is at best a very limited type of resale involving an accounting change with no change in power flows.

If the location of the power source, load, or both changes, some studies may be required of the technical

feasibility of the new arrangement, its effect on reliability and system stability, and the effects of new loop flows on neighboring utilities. Such studies may be a necessary prerequisite to resale and would have to be conducted separately for each resale option.

Issue: Third-party Costs and Benefits

Question: Since most grid enhancements have multiple costs and benefits, how should system expansion costs be allocated among the new users on the margin, the retail customers of the transmission provider, those who retain eventual ownership of the upgrade, and third parties who receive costs or benefits?

Background: In ratemaking, state commissions typically try to attribute a cost to its source and a benefit to its recipient. In transmission grid growth, it is not always clear who the cost causers are and who the beneficiaries are.

Transmission-providing utilities say that transmission-dependent utilities, new users of transmission facilities, and others considered to be marginal users cause system expansion. However, these users say that they should receive the same treatment as retail customers of the transmission-providing utility and pay embedded cost, or at least they should not have to pay incremental cost indefinitely. Some users of dedicated lines that are paying the full capital cost of the lines argue that ownership, or something like ownership rights, should be transferred to them at some point.

With a grid-like, multiple-utility network of transmission lines, third parties that are not part of the agreement to transfer power are also affected by new construction. They may either incur costs from line losses due to loop flows when their lines are near the new capacity or receive benefits from the added reliability of the new network. While these costs and benefits are known to occur, they are ignored because of the difficulty of measuring them.

As a result of the integrated nature of the grid, some argue that it is wrong to assign all system expansion costs to those that request the last wholesale transaction. Some sort of system average cost, they contend, is more appropriate.

Policy Choices: This issue of who should pay the expansion cost and who actually receives the benefit is largely a question of fairness. The transmission network is a facility used in common by many parties, and there is no correct way to allocate common costs among the users.

In theory, it is possible to identify not only the causers of incremental costs but also the beneficiaries of the new facilities. With perfect measurement of benefits and costs, those who benefit from a new transmission facility could be assigned a fair proportion of the incremental costs.

The measurement of operating costs may soon be possible. EPRI recently indicated that "... with minimal modifications, control center software can keep track of flows of power through complex networks in real time and with surprising accuracy" (*EPRI Journal*, Sept. 1989). These types of developments make obvious that, over time, utilities will be able to determine more accurately who is benefitting from their lines or causing loop flows. Then operating costs can be determined accurately, and any third party that is harmed or benefitted by a transmission facility can be compensated or assessed for the cost incurred.

The equitable sharing of capital costs is another matter--one that has been debated constantly throughout the history of public utility regulation.

Even with more accurate measurement of third-party benefits and costs, state and federal authorities may be required to agree on a fair capital-cost-sharing standard for the parties involved. This could lead to pricing practices that properly balance the interests of retail and wholesale ratepayers, shareholders, power suppliers, and power buyers.

5. ISSUES RELATED TO LAWS

- FERC Conditioning Authority
- Antitrust Laws and Ownership Rights
- Just and Reasonable Flexible Rates

Issue: FERC Conditioning Authority

Questions: Can or should FERC set policy through its "conditioning" authority, or is new legislation a better approach? Can "conditioning" create an effective obligation to serve in the case of wholesale power wheeling?

Background: The Task Force Report does not deal explicitly with the issue of whether the FERC can or should set transmission pricing and access policy through the use of its conditioning power under section 205 and 203 of the Federal Power Act (FPA). Even so, the Task Force Report contains implicit assumptions that the FERC's conditioning authority under the FPA is sufficient to set transmission pricing and access policy. Specifically, in table 5-1 (p. 148), the Report identifies the Contract approach as requiring no new legislation. The Task Force also recognizes that implementation of other policy alternatives, specifically the Planning and British approaches, probably would require new legislation.

Under a Contract approach, the FERC would use its conditioning power under the FPA to set price and access policy. The Task Force Report (pp. 182-184) suggests that it might be possible to retain an essentially voluntary access policy while providing ample incentives for utilities to provide transmission services. This could be done by making a utility's eligibility to price power flexibly in nonfirm power markets conditional on the willingness of the utility to provide firm, unbundled transmission services at cost-based rates to all nonfranchise customers.

In the past, the FERC has decided that there is no express obligation to serve wholesale customers in electricity. If the Contract approach were followed, the Task Force

does not intend to use the conditioning power to create any obligation to serve beyond that which would be enforceable by contract.

Policy Choices: One policy option is to maintain the legal status quo. A second is for the FERC to attempt to entice utilities to provide access to their transmission systems voluntarily by conditioning the availability of flexible pricing in nonfirm power markets on the availability of cost-based, unbundled firm transmission service. This second policy option relies solely on contract provisions and FERC's conditioning authority to provide an obligation to serve wholesale power customers. A third option for the FERC is to seek new legislation that clearly sets out FERC authority to mandate access to transmission systems.

If the current legal status were to remain unchanged, the FERC would continue to be able to mandate access to transmission facilities only if the provisions of PURPA section 202, 203, and 204 were met. These statutory provisions severely limit FERC authority to mandate access to transmission facilities. As mentioned, many state commissions have asserted authority to mandate transmission access. However, the FERC still has sole authority to set rates, terms, and conditions for transmission services in interstate commerce. Courts have held that the FERC can attempt to entice wheeling, but cannot use conditioning to mandate wheeling. Electric utilities that are strategically located with bottleneck facilities could continue to deny transmission service and attempt to earn monopoly profits by buying on the wholesale market and reselling to captive customers. A more competitive bulk power market likely would be frustrated.

If FERC's conditioning authority were relied on to entice voluntary provision of wheeling, no new legislation would be needed for the development of a more competitive (and presumably more efficient) bulk power market. Of course, FERC's conditioning power is likely to be tested, especially in light of existing case law that prohibits the FERC from using its conditioning power to mandate wheeling. This casts doubt on the ability of the FERC to "entice" wheeling through its conditioning power. If the FERC only entices voluntary wheeling, the cases might be distinguished and not binding. By creating incentives for voluntary transmission access and service, the FERC may well be able to distinguish those cases. However, the reliance solely on contractual provisions to enforce an obligation to serve may not be satisfactory for wholesale customers, particularly captive ones. Currently, the FERC staff is advocating this option in a case involving Public Service Company of Indiana.

A third policy option is to petition Congress to pass legislation (1) clearly establishing FERC authority to mandate wheeling, (2) authorizing joint planning, or (3) restructuring the industry. An advantage of this option, for those seeking significant industry restructuring, is that such restructuring is made possible. A disadvantage is that all major players would lobby Congress to protect or advance their own interests. It is uncertain whether any new legislation would be enacted and, if it were, whether it would improve the efficiency of the bulk power market.

Issue: Antitrust Laws and Ownership Rights

Questions: Antitrust laws allow denial of access to an essential facility like a transmission line if the facility is already fully used to serve the owner's own customers. Do antitrust laws properly balance ownership rights and economic efficiency in transmission facility use? Or is additional federal policy required because of the special characteristics of bulk power markets?

Background: The FERC is duty-bound to consider and mitigate any anticompetitive effects of its orders, decisions, and rules. As noted previously, the Task Force Report suggests that a utility should be denied use of its own transmission facilities under certain circumstances, including if it fails to expand its transmission capability in a tight market. Under such a circumstance, the Task Force suggests that an appropriate policy would be to require the transmission owner to curtail its own short-term coordination trades to the extent necessary to accommodate requests for long-term, firm transmission. This denies the utility the use of its own essential transmission facilities to serve its retail customers.

The essential facilities doctrine in antitrust law was developed to balance properly the equity rights of an owner of an essential facility (the monopoly) with the interest that society has in the efficient use of the facility to provide competition. The essential facilities doctrine (or bottleneck theory) creates an antitrust violation if a monopoly controls an essential facility (such as a transmission line), a competitor cannot practically or reasonably duplicate the facility, the monopoly denies access to the competitor, and it is feasible for the monopoly to have granted access to the essential facility. While the first three conditions can

easily be established when an electric utility refuses access to a transmission facility, the fourth condition can be troublesome. In particular, courts have held that it is not feasible for a monopoly to grant access if it would impair the ability of the monopoly to serve its customers adequately, if there is some technical impediment that makes granting access impractical, or if there is insufficient space to provide the service. Under antitrust laws, when granting access would deny the owner use of its facilities to serve its own customers, the proper balance between an owner of a transmission facility and a competitor who wants access would be to allow the utility to deny access.

The Task Force Report suggests (pp. 82-85) that, given the special characteristics of the bulk power market, providing access to existing essential facilities is insufficient to solve market power problems. There must also be a policy for providing new transmission facilities as needed.

Nevertheless, while the bulk power market does have special characteristics, the interest of a utility in using its facility to serve its own customers first is particularly strong due to the explicit state-imposed obligation to serve retail customers. (We set aside here the important issue of whether there is or should be an implicit obligation to serve wholesale customers.)

Policy Options: We consider three policy options: rely solely on existing antitrust law, adopt the FERC policy of denying the utility the use of its transmission facilities to serve its own customers in a tight market, and create an obligation to serve firm transmission service customers, which includes an obligation to expand facilities to meet their needs.

The first option, relying solely on existing antitrust law, upholds the right of a utility that owns an essential facility to use that facility to serve its own customers. Further, there is no antitrust requirement that a utility expand its transmission facilities to meet the needs of potential firm service transmission customers. A utility may, if it wishes under the status quo, operate its existing bottleneck transmission facilities, maintain its market power, and look for opportunities for monopoly profit from those desiring transmission service.

The second option is to go beyond the antitrust laws, denying the utility use of its transmission facilities to serve its own customers if there is a tight market. But this approach has undesirable features from an antitrust perspective. The utility has a franchise obligation to serve its retail customers and a contractual obligation to serve its full- and partial-requirements customers. It is inequitable, as recognized under the antitrust laws, to require a utility to provide access to its essential facilities to competitors while denying the utility's own customers adequate service. This inequity is even stronger given the utility's obligation to serve at retail.

If some mechanism must be put in place to give the utility an incentive to expand its facility to accommodate long-term transmission service requests, a third option is to create an obligation to serve long-term transmission service customers, including a duty to expand facilities to meet their needs. The utility still would be required to provide adequate service to its existing customers first. But there would also be an obligation to provide service to those seeking long-term firm transmission, concomitant with the firm service contract. The

obligation of the utility to expand its transmission facilities would require the utility to plan, site, and build the transmission lines necessary to eliminate bottlenecks (and so reduce the utility's market power). Both equity and efficiency concerns would be met by this approach.

Issue: Just and Reasonable Flexible Rates

Question: Are flexible transmission rates, subject to a price-cap, just and reasonable under the Federal Power Act?

Background: Under the Contract model, long-run transmission service would be cost-based, while transmission-providers would be allowed some flexibility in setting the price for short-run service. These flexible rates would be subject to a price cap, perhaps set at long-run incremental cost.

The Report's discussion of flexible pricing for short-term transmission leaves a lot of leeway for implementation. It does not specify a price cap (presumably the long-run marginal or long-run incremental cost of transmission), it does not specify whether a utility's collection of congestion costs would be monitored after the fact or whether the utility would be allowed to exercise market power to earn monopoly profits, and it does not, of course, provide an explicit obligation to expand transmission facilities as needed.

The Federal Power Act requires the FERC to set transmission rates at a just and reasonable level. The United States Supreme Court has interpreted this standard as requiring that rates be set within a "zone of reasonableness". Traditionally, this zone has been understood to require cost-based rates that are lower than what would be considered excessive to customers and higher than what would be confiscatory to a utility's investors. For rates not to be confiscatory, rates must not fall below the variable cost of service. For rates not to be excessive, rates should never be set so high as to allow the utility to exploit its monopoly power. While the variable cost of transmission service is, in principle at

least, easy to determine, it is more difficult to determine if rates are set too high.

Traditionally, FERC has used embedded cost-based rates. However, the outer bound of what courts consider to be permissible defines the zone of reasonableness. Marginal or incremental cost-based rates are permitted by the federal courts if the FERC demonstrates with substantial evidence on the record that there is a basis for the rates. Mere reliance on economic theory as a justification is not enough.

Policy Options: We consider three policy options: maintain the status quo, adopt a version of the Contract model having flexible pricing for short-term transmission service, and adopt a version of the Planning model to price short-term transmission on a spot-price basis.

The FERC currently accepts industry practice that bundles generation and transmission services. The Commission sets prices for firm power and wheeling on the basis of cost, while allowing prices for both generation and transmission that can significantly exceed cost (up to split-savings) for short-term economy power trades. The result is a strong incentive for utilities to buy and resell coordination power rather than wheel. Under the status quo, the split-savings approach to transmission yields some profit to the wheeling utility. Both the selling and buying utility also receive a share of the profit.

Another option is to permit flexible pricing of short-term transmission service, up to some undefined price cap. One intention of the Task Force, as set out on pages 87 and 88 of the Report, is to encourage efficient transmission service with existing facilities. The Report suggests pricing short-term service at short-run marginal cost,

with some provision for congestion costs. During periods of transmission constraint, prices would be allowed to rise so that those transactions that reduce electricity costs the most would continue to occur, while less efficient transactions are curtailed. The inclusion of congestion costs in marginal-cost-based pricing would be difficult for a regulator to implement--hence the recourse to flexible pricing.

As the Task Force recognizes, a utility paid for congestion costs can earn monopoly profits if it does not expand transmission capacity appropriately. Unless the flexible pricing concept is designed so that monopoly profits are not possible, the courts might consider flexible pricing for short-term transmission to be outside the zone of reasonableness, resulting in rates that are not just and reasonable.

A third option is spot pricing of short-term transmission service. Though the proponents of the Planning-type models would not necessarily agree, the Task Force suggests (pp. 159-160) that short-term coordination transmission might have "regulated spot prices." Spot pricing is cost-based, but it faces similar difficulties to those faced by flexible pricing. To assure that the utility is not earning monopoly profits, there should be some way to check that any charges for congestion costs reflect actual congestion on existing lines and are not reflective of an exercise of market power. Also, there must be some obligation to expand transmission facilities as needed and as economically justified to prevent powerful utilities from dominating joint planning, thus creating bottlenecks by which they can earn monopoly profits. These conditions may be necessary for spot prices also to be considered just and reasonable.

