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HARVARD ELECTRICITY POLICY GROUP
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MEETING SUMMARY

First Session: Municipalization and Electricity Restructuring

The jurisdictional separation between wholesale and retail markets may be "sharply" defined to some or blurred in a "themeless web" to others. Notwithstanding the clarity of the distinctions, there are many ways to scale the jurisdictional barrier. The EAct provided the Federal Energy Regulatory Commission with certain authorities in the wholesale market under the assumption that the remainder of the electricity industry would somehow remain under separate authority. Framers of the EAct have asserted that there was little consideration of the impacts of possible changes in jurisdictional authority through municipalization or other means. There is a clear interest in understanding how changes in jurisdictional status interact with the restructuring of the electricity industry and the emergence of competition.

First Speaker:

As a representative of an electric utility, I'd like to give you our perspective on municipalization. To give you a working definition, municipalization is basically about the displacement of a franchised investor-owned utility by a publicly-owned or government-owned utility. Two things have happened in recent years to increase the imperative toward municipalization. One is the transmission access provisions of the National Energy Policy Act. The other is the fact that in some areas, retail rates have departed significantly from market prices. It's that gap that causes people to look at municipalization. How did this happen? Some

utilities have a tendency to focus on the administration of PURPA. Others point to the addition of high-cost capacity in the investor-owned utilities' portfolio, primarily the nuclear plants that came on-line during the 1980s. Another factor that tends to be ignored is the excess capacity in certain areas. When you take the total average cost of all of the units we own, including the full gamut of ancillary services, the average cost is five and one-half cents. Our estimates show that if it weren't for the dampening effects of excess capacity, the electricity pool price would be right up around five or five and one-half cents in our state. So the problem is divided between high-cost generation and a depressed market price. A few other factors which may

contribute to the impression that a municipal system might be more economical include differentials in taxation. In addition, municipalization tends to focus on the more densely populated areas of the existing industrial utility, rather than the more sparsely populated areas between communities. Further, many special environmental or social programs and requirements that fall on an investor-owned utility might not be passed on to a municipal.

The conventional approach to municipalization is that of condemnation, where the local government votes to create a utility, to take over existing facilities and become a wholesale purchaser of power. Another approach is buyer leverage. Then there's the variation called Muni Light, which looks at the minimum amount that must be condemned in order to become a municipal utility. The basic idea of all the approaches is to get at the opportunity to become a power marketer, to find alternative sources of supply to the ones provided by the existing investor-owned utility.

The recent FERC NOPR established the principle that utilities are entitled to full recovery of legitimate and verifiable stranded costs at both the state and federal level, including when those costs are stranded by municipalization. The proposal for recovery is accomplished by assigning such costs to departing customers, i.e., the new muni. In addition, there's the question of the costs and risks in securing bulk **power** and owning an electricity network. There's also the potential for deterioration of the reliability and quality of service. And if the whole point of municipalization is to get at alternative sources of power supply, if and when retail access is accomplished it will in effect render the whole effort unnecessary.

There doesn't seem to be any evidence that a municipal system is going to be any more efficient than an investor-owned utility. Issues of taxation and regulation may be different, but we don't feel that there's a significant case to be made either way on those grounds. There are scale economies to operating distribution companies up to a certain size, and coordination advantages in having a large distribution company and a large transmission company. And in terms of maintaining standards of safety, consumer protection, fairness of rates, and environmental requirements, it's obviously easier for the government to deal with a limited number of larger companies than a large number of small munis. The legal and engineering costs of the transition to municipalization are also considerable. The service territories of large utilities rarely correspond with political boundaries, so there would have to be some significant reconfiguring of the system alone. We suggest that those kinds of expenditures don't really add value. And protracted litigation just provides another distraction and a drain on the resources of the community.

If municipalization is not the answer to high prices, then what is? Unfortunately there's no easy solution to this. We do believe that competition is the best way to improve economic efficiency. We think that in the short run, the only way for some customers to experience significant price reduction is by shifting costs to other customers, which can only lead to conflict and litigation. We feel that it is better to try to deal equitably and fairly with the transition cost issue, so that we can move more swiftly and effectively to a competitive environment that can produce the long-term benefits we're seeking. Then it may be possible in the future for investor-owned utilities and munis to re-engage in their long

battle for customer allegiance. And I think at that point we'll see other competitors on the playing field as well.

Second Speaker:

Obviously the right to municipalize has, under state laws, been around for a long time. It was explicitly encouraged by laws that gave preference to public bodies in purchasing power from low-cost generators. But the classic municipalization has always posed an extremely difficult challenge both politically and financially. And of course, there was also the problem of lack of transmission access.

Over the last fifteen years there have been no more than thirty municipalizations. But with the Energy Policy Act of 1992 and more recently our [FERC's] NOPR, we're trying to make high-quality transmission access readily available by tariff to wholesale entities. However, as the states move toward retail access, the pressure to municipalize decreases. The incentive is further dampened by the Commission policy as spelled out in the recent NOPR of full stranded cost recovery in the event of municipalization, which could require consumers to pay the costs they seek to avoid.

The Commission has long been aware of the relationship between wholesale open access and municipalization. At one point before passage of the EPAct, Entergy had an open access tariff approved that included a specific provision that they need not provide wholesale transmission access to a new distribution system formed for the purpose of serving former Entergy customers. By contrast, there's now an evolving point of view that there's no basis for

entity, even if said entity was formed to serve customers formerly served by the private utility. To paraphrase the Federal Power Act, a newly formed municipal entity is not engaged in a sham transaction -- and thus may secure a wheeling order -- if it would use transmission or distribution facilities that it owns or controls to ^{deliver} to the consumer all of the electric energy subject to the wheeling order. But what if the new municipal entity simply acquires a few retail customer meters? Is this a legitimate strategy? It's clear that at some point an investment in minimalist facilities would be so frivolous as to become a sham, and that there is a point beyond which the Commission would probably not be willing to go if it looks as if the entire transaction is retail wheeling in disguise, merely trumped up to qualify for a wheeling order. We were told by Congress that we could not order retail Wheeling, and we are very serious about not doing so.

In order for the FERC to issue a §211 wheeling order, the Commission must find that the proposed wheeling order is in the public interest. In the past we have construed this requirement very liberally. However, I believe that if it chose to, the Commission could seize upon this requirement to deny access if the transmission smacked of a sham. Further, I think that over time we will see a melding of FERC's transmission access standards under various provisions of the Federal Power Act. Even though §205 and §206 don't explicitly address sham transactions, I think the Commission could look to §211 and §212 to define a sham transaction and to discern the meaning of the public interest standard.

Finally, this same Federal Power Act §212h seems to grant a rather explicit authorization to states to be creative in the

administration of electric power, so long as they don't cross the sham transaction threshold. The Act gives states a fairly broad authority to craft new political subdivisions in an effort to provide cheaper power to their residents. The current fight over municipalization is not just a fight between public power and investor-owned utilities. It also involves conflict among investor-owned utilities and among municipalities. To quote Coopers and Lybrand, the current municipalization phenomenon is more a manifestation of competition than a contest between public and private power.

If the FERC found a proposed municipalization to be a sham, then it sounded like you were saying that you would deny them the right to wheel, as opposed to simply loading on a stranded cost to the wheeling rate equal to the difference between the retail and the new wholesale rate.

Second Speaker: The Federal Power Act makes it very clear that there's a point beyond which FERC should not go, and that's the point of ordering retail wheeling. That's why it's not merely an issue of dealing with the difference through stranded costs.

: You talked about states creating new entities for power administration. Where would you draw the line there? Would a state higher education power authority, for instance, be only for public colleges, or would private facilities also be served? When does this cross the line and become a sham transaction?

Second Speaker: The Act merely provides that if a state creates a new political subdivision that's in the electricity business, and I'm assuming that how it does that will be subject to state laws, as long as that entity

owns transmission or distribution facilities and uses those facilities to distribute all of the power that's subject to the wheeling order, then it's not a sham transaction and is legitimate.

Third Speaker:

The pluralistic structure of the U.S. electricity industry is unique. No other country has a similar mixture of participants: investor-owned utilities, local public utilities, co-ops, and the federal government. This has been an extremely successful structure. Nevertheless, the issue of whether to have public ownership of utilities in the United States has often elicited strong views.

Public power was born of a desire of local citizens to provide for themselves, a desire to bring the control of an essential service close to home, and it is often seen as a demonstration of economic and political freedom. Many of the municipal systems that were formed before the turn of the century are still in operation today. Hausman and Neuffid's 1991 study of the relative efficiency of publicly and privately owned utilities in operation at the end of the nineteenth century concludes that publicly owned utilities at the time were significantly more efficient than their privately owned counterparts. The authors go on to observe that of eight more recent empirical studies, three found no difference between the two forms of ownership and four found a significantly greater efficiency in the public firms. Only one found evidence of greater efficiency in private firms.

John R. Commons, writing nearly a hundred years ago, remarked that the success of municipal utilities in small communities was due to the ability of local government to

perceive and address local needs. This is one of the reasons for the remarkable durability of public power systems in this country: the public spirit and determination that were noted by observers in the nineteenth century are still in existence today. And these systems understand competition very well, because in virtually all cases, the municipality has been able to survive only by delivering low rates and better efficiency than their potential competitors. Many municipalities are really very dedicated to maintaining their independence, and that they are constantly competing for their very existence. It's true that some of them are mismanaged; but when that happens, if they undermaintain their systems or if they can't produce competitive electric rates, they're sold. There's always been competitive pressure on municipal electricity systems, and they've benefitted from it. Residential rates for publicly owned electric utilities in this country are 23% lower than those paid by the residential customers of privately owned utilities, while commercial rates are 19% lower.

Some of the factors contributing to these savings include: (a) public systems are non-profit and do not pay dividends to outside stockholders; (b) they have lower administrative costs; (c) they do not pay federal income tax; (d) they can issue tax-free revenue bonds for capital expansion, and (e) they have access to low-cost hydroelectric power marketed at wholesale rates by federal and state agencies. The latter benefit, of course, is available only to some and not to all. An econometric study conducted by the APPA concluded that, even without such advantages, public ownership remains associated with significantly lower electric power prices, and that approximately sixty percent of the price differential between public and private systems is due to

ownership.

I should point out that investor-owned utilities enjoy their own advantages, such as deferred income tax balances and accumulated deferred investment tax credits, as well as outstanding taxes and bonds. Even a cursory review of the legal, political, and economic factors involved in municipalization makes one thing clear: forming a municipal electric utility is a painstaking, complicated, expensive and controversial task which is why it's not commonplace. No new systems have been formed since the enactment of the Energy Policy Act of 1992. Many communities consider municipalization, but most opt out, fearing a protracted and costly legal and political battle. Others, whose primary goal is rate reductions anyway, successfully negotiate a new franchise with a current supplier, resulting in lower rates and/or better service. Those who proceed often face a belligerent and well-financed private utility that spares virtually no expense in trying to block the local effort.

History suggests that the formation of a dozen or so new municipal electric systems would provide a splendid tonic with which to speed the realization of some of the consumer benefits anticipated by some of the proponents of the Energy Policy Act of 1992. The most prominent characteristic of the U.S. electric utility industry is its pluralism of ownership forms. It's somewhat surprising, therefore, that so few voices are calling for increased municipalization. Restructuring in the U.S. electricity industry is not a recent or revolutionary reaction to social, economic, or technical change. It's the result of an evolutionary pattern going back more than two and a half decades.

The privatization experience of the

United Kingdom is sometimes cited as a model for the U.S. However, in the British Isles, a monolithic, vertically integrated system was subdivided. In the U.S., the attempt is to take a polyglot collection of thousands of utilities and turn them into a system. And as George Yarrow observed, the results of the U.K. electricity privatization experience have benefitted investors while raising prices for consumers.

In the American debate, some investor-owned utilities have suggested that they be awarded a discounted present value of as much as ten years' lost revenue from departing customers, on the grounds that they had a reasonable expectation that they would continue to serve the departing customers forever. Having struggled to free themselves from the bondage of a single supplier, customers find it a bit unreasonable to now be required to pay ransom for a freedom that should have been theirs all along. The DC Circuit Court recognized that there really is no such thing as a stranded asset, only a failure to compete. To permit the recovery of stranded costs through the transmission rates of departing companies involves an illegal tying arrangement, per the court's decision in Cajun vs. FERC;¹¹ and I believe that this decision raises serious questions about the viability of FERC's outstanding proposals pertaining to stranded investment.

: Here's a question for the first speaker. The stock of your company is selling at about 85% of book value. Why, then, should you resist a municipalization via takeover, which in your state has to be at reproduction cost? What circumstance could there be that would make you not a seller?

First Speaker: It depends on how it would affect ability to serve our surrounding customers.

Municipalization may be an advance in villages and towns, but it may result problems for customers in the surrounding rural areas. If it were a matter of someone simply coming to us and saying "we would like to acquire your distribution property" at a price profitable to our investors, then we'd obviously have to look at it very seriously

: So if you were assured that you were not going to recover stranded costs, then all your opposition to the municipalization of your distribution facilities would go away. It's a question of how you maximize shareholder value.

First Speaker: That's an overly simplified example of what might ever happen in the real world. Even though we're owned by our shareholders, no business stays in business for very long if it isn't doing right by its customers.

In fact, you are actually agreeing with each other. The point of dispute is that there are some assets that are worth more than the market value of the company's shares and others that are worth less, and the share price represents a sort of average. So you wouldn't want to sell the really good assets for the average value of all the assets, which is the share price.

: So you'd have to vertically disintegrate the company.

: That may make some sense. There are parts of our service territory that are very expensive to serve, like extremely rural areas where people have cabins and spend only two weeks out of the year, as well as

some remote communities with paper mills and so on. If a local community for some reason wanted to take over the lines in one of these areas, our total cost would actually go down. But those are not generally the communities that want to municipalize. The sleeper issue is what happens to the universal service obligation. The way we have funded it in the past is through postage-stamp rates. What would be the effects of eliminating that effective subsidy to some of these marginal communities? It's a really tough public policy question.

: But in the end eliminating subsidies for people who spend two weeks in a cabin in the Adirondacks would be a perverse kind of income redistribution.

There was a previous analysis that captured the essence of this problem. Any situation where you sell assets off at average prices but the buyers get to choose what they're going to take and what they're not going to take is going to give you very funny economic signals. At one point somebody argued that the wires ought to be valued up to their real value, and then the question became, what is the value of the wires? There's no simple economic efficiency argument about what these things ought to be worth independent of regulatory policy.

: Here's a question for the third speaker. I understood your concluding comments to be that the APPA doesn't see any merit to the argument that stranded costs should be covered. I was a bit surprised at that because some of the municipals have been adamantly opposed to retail wheeling specifically because of the potential stranded costs issues that would raise for those cities.

Third Speaker: I was trying to be a bit provocative with respect to some of the opinions expressed by the FERC. The issue has never been parsed sufficiently and it seems to be headed down a road where it is going to be lawyered to death. If I end up paying stranded costs, do I have a right to the asset I'm paying for? If these kinds of questions were fully fleshed out and adequately answered, there might be some stranded costs that could be seen as legitimate. But there's been more than adequate warning of probable changes in the industry, and the "reasonable expectation" argument is no longer compelling.

: It's a deal. You get open access and the utilities get stranded cost recovery. You can't get open access as generous as we've provided here without some provisions for stranded cost recovery. It's a political deal.

: What about the situation of New York utilities which by law have been required to take on power supply commitments which are uneconomic? This excess capacity situation has driven up costs and depressed the market price. How can we deal with this in a way that is equitable to the investor?

: If the pressure for municipalization and the pressure for retail access are really two sides of the same coin, wouldn't it be better for overall efficiency if we opted for retail access? Retail access will drive the generation system toward greater efficiencies and benefit the system overall, as opposed to the losses and costs of municipalization.

: As long as state regulators are willing to deal with the stranded cost question; otherwise it's not sound public policy.

: The debate over municipalization is driven in many circumstances by the industrial which would otherwise remain a retail customer seeking to municipalize itself two houses, and a meter in order to access the wholesale market and effectively circumvent retail service. It's a different kind of economics from condemning the distribution system in a town that serves 400,000 people.

: In the case of both Cleveland and Clyde, Ohio, the municipal simply expanded and offered choice to the retail customers. Cleveland Electric and Toledo Edison are both losing revenue, but there's nothing that actually prevents them from doing business. There are thirty or forty such cases of door-to-door competition across the country. Do those utilities qualify for some sort of stranded asset consideration or is it considered complete open competition where they're losing on the free market?

: The crux of the issue is that we as an existing utility have above-market costs in our portfolio that were originally a matter of state policy. The excess capacity that's affecting the market today is a result of such policies. Were arguing that because the state required us to make uneconomic investments, it should be required to ensure that we're able to recover those investments.

: If retail access and municipalization are, as someone said, two points along a spectrum of alternative electrification schemes, then what about FERC's opinion of competitive franchising proposals like we've seen in Massachusetts. A city could just decide to issue an RFP and seek proposals for its electricity supply as a way of providing customers with choice without some of the

pitfalls of retail access and the disadvantages of municipalization.

: It certainly doesn't seem to be the kind of sham that FERC would be concerned about.

: There seem to be a variety of things that states and cities can do within the parameters of the Energy Policy Act and that we would allow simply because we hadn't any reason to prohibit them. Let's assume that a new municipal entity is formed that technically meets the requirements of §212h, but which only involves a few retail meters. Should federal regulators be concerned about such things over and above the technical requirements of the Act?

: You know, all these problems you're having are happening because you've got this ghost at the feast called stranded assets. Why don't you just write down the stranded assets instead of spending so much energy trying to keep people from escaping from the burden? We wrote down a lot of assets in the telecom deregulation, and now we have better service than we've ever had before, together with profitable companies. Whereas it seems to me that there's no way to come to grips with this stranded asset issue except for an endless stream of more and more regulation. Is that what we want?

: I'd like to ask the APPA speaker, what is your view on stranded costs when municipalities are the holders of those costs?

: And I'd add to that: in addition to the high cost munis that we have in New England, some of which own a lot of Seabrook or other high price plants, we also have a number of munis with trash burner contracts that were

forced on the regional utilities at retail pricing. Some of these munis would be bankrupted by the withdrawal of that income. Are we going to allow the minis to be competed with? We have eighty-odd mums in New England. If we allow retail access I can foresee widespread municipal bankruptcy on our hands. We'll see situations just like Orange County all over the region.

: Well, let me reiterate that I'm not speaking for the APPA today. And I've been careful not to advocate retail wheeling. I'd suggest that if we get the rules properly set at the wholesale level, that the major impetus for retail wheeling will disappear.

: Really genuine open wholesale access will be more of a threat to existing municipal systems than a stimulus to the formation of new munis. Some of the current participants in the industry are going to go out of business because they're sitting on uneconomic assets. But I don't think that that sets up a strong argument for substituting the judgement of the federal government for those of the several states.

: But should we allow muftis to bankrupt entire communities? The threat of bankruptcy may be a good discipline on private companies, but for a municipal entity it's another sort of policy question altogether, because of the other things that will be affected like schools and so on.

: Why shouldn't a government be able to go bankrupt? It might provide a needed rein on unwise investments.

: The APPA testified in 1983 that PSNH was going to go bankrupt if they built Seabrook IL. And their response was to deem that "informational terrorism." I don't think

they should be protected from the result of their actions.

: The division between high-cost and low-cost producers on the issue of municipalization is much wider than I was ever prepared for. I was approached by a low-cost industrial utility which proposed supporting feasibility studies for community municipalization, with the expectation that they would become the power supplier for those communities. They were willing to split the benefits with those municipal systems between the rates the muni might get from the current retail supplier and their own costs. We didn't accept the invitation to join them, but the proposal marked in my mind a significant watershed.

: Someone proposed a debate on stranded costs in which the FERC would take over if the states left an issue on the floor. Why should FERC second-guess the states if the states choose not to deal with stranded cost recovery? Similarly, what if a state decides to encourage economic development by allowing the municipalization to say, a steel mill so that the mill can shop for power?

: I don't know what line to draw in the ultimate document. I think the NOPR itself focuses more on decisions by the state commission. It's a good policy choice for the FERC not to second-guess the legitimate authority of the state commissions. But the document also has the effect of federalizing the issue of municipalization, discouraging even the states that have clear authority to deal with the stranded cost issue in the context of municipalization from doing so. The

commissioners are divided on this one: at what point should we believe that the state has in fact thoughtfully considered the issue and decided that the action they're going to take is to leave the situation alone? We expect we'll get a lot of comments on that issue in the NOPR.

: Stranded costs as an issue is not going away. There is this perception in everybody's mind that this is somehow somebody's fault and if we can find out whose fault it is, we'll know where to place the blame. Someone recently commented in another meeting that the question is one of fairness and of asymmetrical risk. Utilities' investors were not allowed to profit during the 60s and 70s when average costs were well below where the market would have been. It's clearly unfair to say, now that costs are high, that investors have to absorb stranded costs. A year ago I was predicting that we'd see the first direct access in 3-5 years. I now think we might very well be looking at the most unbelievably painful litigious unproductive period of regulatory gridlock any of us has ever seen, and it will be driven by this issue of stranded cost recovery. The only chance we have at moving forward will be if regulators can just make allowance for the recovery of prudently incurred costs as the price of undoing the old system and getting on with the new. Anything less and utility managers will have no choice but to fight the process at every step. And that's not a very productive way for any of us to spend the next 5 years.

: In almost every discussion we've had as a group we've recognized that the stranded investment issue is really at the core of the problem. The only way to move the process forward is to acknowledge that utilities were

forced, as part of the regulatory compact, to incur costs that will prove uneconomic under a restructured system. The recent FERC order is a first step in doing that. Hopefully it will act as a lightning rod for the states to take comparable positions. Meanwhile there will be entities who will seek to get on the margin of municipalization because the costs are lower, and it's important to watch out for that.

: Someone mentioned "wiping the slate clean." From an economic efficiency point of view, it's a good idea in order to move ahead. But it's important not to assume that there's only one way in which it can be done. Assigning the cost to shareholders is not the only option. It's necessary to figure out decisively which path will be quickest, because some of the costs we're trying to deal with are associated with delay. Some of these pool-based mechanisms, along with what's called efficient direct access, are often attacked as being slow. They might turn out to be the fist paths when you think through what actually has to be done. Meanwhile there are costs associated with bad investments, and in the interests of efficiency we need to see that they are dealt with as well.

: If we're talking about wiping the slate clean, we need to have a better understanding of who it is that gets wiped out and what that means.

: On one side are some stranded costs, and they're not trivial. On the other side are the enormous benefits to be reaped from implementing a competitive market as quickly as we can. In terms of the industry as a whole it doesn't really matter if one utility takes a hit while another goes up a bit. It's a wash

transaction in the portfolio of electricity as a whole. But if we move to a competitive market, the value of the portfolio increases.

If we're trying to get at the basic economics of the situation, it appears that most of the benefits of munis amount to pure subsidies, especially the various tax exemptions. The question of efficiency is further complicated and hard to resolve. So if we're going to restructure the industry, we need to rethink exactly what the rules will be so they are consistent on both sides, public and private.

The stranded costs were incurred. They're sunk. The dollars have been spent. And so I wonder if there really is an interest in moving forward as quickly as possible. Because in fact if there is delay, stranded costs go away, as long as you don't create new ones.

: Utilities can delay because they haven't recovered stranded costs, but we've got to remember that the EPAct was passed in the first place because competition was already arriving. Utility delays on access do need to be addressed. But the flip side of the problem is that competition doesn't go away. Delays increase the likelihood of more stranded assets in the future, that customers will find new ways of leveraging to get lower rates. The argument that we should de-stress the degree to which utility assets go to market value is a legitimate argument. And it seems to me that there may be more value in pursuing that argument as a sort of grand solution than in going asset by asset and trying to figure out what's stranded and what's not.

: We can debate the economic purity of how one deals with stranded assets until hell freezes over. That's certainly what we'll do if

we have to litigate. Or we can try to get a deal put together like what's been done in Rhode Island, to try to give everyone decent transition strategies to solve a lot of these problems. The theoretical debate about stranded assets is interesting, challenging, exciting, and worthless, because as soon as we choose to litigate it we will get nowhere fast.

: I have no doubt that all the cost incurrers can sit down and work out a grand bargain. But why do we have to bargain with the electric utilities when we didn't have to bargain with the airlines about the values that were being destroyed by introducing competition? Whence comes the utilities' strong position to affect the timing, which the airlines didn't have?

: From the private property rights to the wires.

: I think we have a choice between a smooth glide path and a crash landing. I can't see that we'd prefer the crash landing. The interest in municipalization that has arisen in the past few years is the consequence of one big event, the passage of the EPAct. That ought to give us pause about just letting the bankruptcies fall where they may.

Second Session: Implementing the "Golden Rule(s)" for Transmission Access in Support of Wholesale Competition

The set of Notices of Proposed Rulemaking on wholesale competition, transmission access and treatment of stranded assets has broken through many barriers in proposing a generic review and comprehensive approach. The proposals address interrelated features of providing access to essential facilities in support of competition while addressing key problems such as cost recovery. The FERC has emphasized the importance of early resolution of the critical transition procedures and rules of the road in order to benefit from the experience developed in the similar transition in natural gas markets. There is a proposal for criteria to be emphasized in establishing the boundaries between state and federal jurisdiction. The FERC strategy and default proposals have succeeded in the objective of precipitating a broad debate and a flurry of activity as everyone involved in the process considers the implications and prepares to respond to the request for comments and alternative proposals. This is a watershed for the industry, with broad implications for future structure and operations.

First Speaker:

The current Commission has been together for two years now. We began faced with the need to make sense of the Energy Policy Act. We took very seriously the notion that Congress wanted to develop a bulk power market. When we faced new complaints about discriminatory practices under the Federal Power Act, we coined the golden rule of comparability: Do unto others as you would do for yourself. Then last summer we realized we needed to address stranded cost issues. It is my firm belief that the only way for us to achieve an open access environment is to deal with stranded costs, and there are social and equity issues for why one should do this early in a transition.

At the time that we issued the NOPR, we had 17 utilities that had some sort of open access tariff on file with the Commission, out of 137 or so total. We have also had a bunch of thorny §211 cases, which frequently involve negotiations between partners who basically aren't willing to negotiate with each other in good faith. It was beginning to dawn on us that as we applied the comparability

requirements to more and more utilities that there clearly was a reason for us to spell out in detail our thoughts on defining some of these terms more carefully so that utilities who wished to comply could have a little more certainty about it. So we issued the NOPR.

We think the NOPR represents a wonderful deal for the utilities. It is the only way that we have figured out to simultaneously get open access across the board and deal with the stranded cost problem. If you just write down the assets, as has been suggested, that may well mean bankruptcy for a lot of utilities. I believe that one of my duties under the Power Act is to have healthy utilities. When we issued the stranded cost NOPR last summer, we were clear that there will be no more guarantees. Now, of course, there are some major things we're going to have to figure out, including comparability in a power pool environment, especially now that NUGs and perhaps people who do not own any transmission at all are becoming part of the power pools. There are a whole host of issues that we'll have to figure out on ancillary services. And there are some very difficult federal-state jurisdictional

issues. I don't see any sign that the Federal Power Act might be amended at any time in the foreseeable future, so we have to use the authority we've been given as regulators to try to make it work. So we've proposed a definition for what constitutes local distribution, to try and enable state regulators to have some place to put stranded costs. It's certainly not the only answer. But at least it provides a starting point for dialogue. Everyone who files comments will be telling us why their ideas are better as a fair resolution of a difficult transition issue. We could go further and do something like requiring utilities to divest themselves of all their generating assets. I don't consider that a way to make progress.

Second Speaker:

I have a kind of idiosyncratic interpretation of the NOPR. I think FERC did the right thing in not telling anybody that they have to de-integrate. On the other hand, I interpret the NOPR as an invitation to de-integrate, to skip the functional unbundling stage and go straight to structural de-integration. The comparability requirements eliminate most of the advantages of vertical integration, and the assurance of 100 percent recovery of prudently incurred stranded costs is a big carrot to high-cost utilities that are looking at large potential losses.

Now it's important to note that the 100 percent figure can't be totally accurate. Somebody recently asked me to offer an opinion on what "prudently incurred," "reasonable expectation of the period of service," and "duty to mitigate" mean. And I can't do that because the bottom line is that these terms are incredibly indeterminate. What's important is not how they're going to be defined in some formal sense, but how

they're going to be defined operationally. Look at the gas industry. In every case the pipelines ate a portion of the costs even though they were assured of 100 percent recovery. When the costs are as large as they are today, there's no way you're ever going to recover 100 percent.

In a sense we have wholesale competition already, since power is available all over the country on the wholesale market at a price running somewhere **between** 2.3 and 3 cents per kWh. But in another sense that's more or less irrelevant, because a lot of utilities are choosing to buy from themselves at 6 cents instead. Vertical de-integration is the quickest and most reliable way to stop that practice. Now the golden rule as applied to comparability is conceptually sound; but it's almost impossible to implement because transmission is so complicated that some people will spend all their time trying to play the system, while the rest of us will spend all our time trying to figure out what exactly counts as comparability. With de-integration, the incentive to play games with comparability is gone. Another advantage is that it greatly eases the task of creating RTGs, encouraging horizontal integration, and so on. It also improves the jurisdictional situation quite a bit. De-integration will cause a lot of the jurisdictional conflicts based on corporate assets to drop out. There is one major flaw remaining: the sole power to authorize construction or expansion of transmission lines lies with the states. That's not going to work in the new environment. It'll cause problems of market power and the generation of market to the extent that there are significant transmission capacity constraints. It will also allow states to retain, in theory at least, 100 percent authority to implement all of the social benefit programs that the state PUCs in many areas are now implementing.

The final advantage is that disintegration will allow us to devise and implement a stranded investment recovery plan right now. And now is the only time to do it in a way that can produce something like a win-win situation. If we can give people a credible commitment that they will have a competitive market that's ironclad certain, they'll be more willing to eat some of the costs now. State commissioners win out because they avoid having to adjudicate between shareholders and small consumers down the road. Now is the time that this can be done with the least pain and the greatest benefit spread among all of the constituent groups.

: Do you mean that utilities who de-integrate voluntarily can shift the stranded cost problem from the state to the federal level, for all assets including what are now retail jurisdictional assets?

Second Speaker: At that point everything is 100 percent wholesale.

: But the state can checkmate that move by saying, okay, we're not going to handle wholesale purchases. Instead, we're going to complete open retail access. All those transactions then revert to retail, and the state's reasserted jurisdiction.

Second Speaker: I don't think the states are going to do that quickly enough.

Third Speaker:

Coming from the transmission sector, my first reaction to the NOPR is that it's a very good piece of work. We're a big player in the bulk power market, and as such are involved in most aspects of things affected by the NOPR. Also, we went through a highly

publicized merger a few years ago, and came out of it with open access transmission tariffs and a requirement to put ourselves on our own tariffs for the purpose of making our off-system sales. So we are about as close as you can get to being in the circumstance that the FERC NOPR is asking to put the entire industry into. We've been living with this sort of a system for three years and it works, and I see no reason why it can't work for the rest of the industry.

Here in the Northeast we have some highly coordinated power pools. They • provide reliability and economic dispatch and they can facilitate competition. NEPOOL, for example, ties reliability to a responsibility for serving firm load. It has an after-the-fact settlement process which greatly facilitates bilateral contracts without a negative impact on regional reliability. There is a mechanism in place for amendments to the pooling agreement. And we are currently negotiating to try to open up pool membership and get more flexibility in transactions.

Now, we do have some problems. We have something called Pool Planned Units which are large jointly owned units. In order to get the units built, fifteen or twenty years ago, it was felt necessary to give a subsidized transmission rate to encourage small participants to buy into these units and achieve what at the time was considered an economy of scale. We also have wheeling within the pool to cover scheduled outages, which is basically done for no transmission charge. This could prove to be a problem inasmuch as wheeling appears to be in conflict with the wording of the NOPK. My real message, however, is that I believe we can comply with the spirit of the NOPR and achieve what FERC wants within the NEPOOL structure. However, we need some

flexibility to do it, and I hope that there is room to take regional and situational differences into account in the implementation of the NOPR.

The FERC test on market power seems to focus on surplus generation. There are two sorts of capacity markets, the longer-term one which might begin five or six years in the future, and the short-term market between now and then. In the first case, new construction is an option and does provide a ceiling on what prices can be charged, so that surplus capacity is not necessarily a good way to measure markets this far in the future. The market in the second case is currently alive and thriving. The fact that some of the participants, in New England at least, have several hundred MW of surplus capacity is really irrelevant, since there are something like twelve to fifteen respondents to each RFP, all of whom are able to fulfill the total requirements for the RFP. What really seems to drive the energy market, at least in the Northeast, is things like unit outages, the availability of lower cost fuel, and problems caused by transmission constraints. So the excess capacity test may be the wrong approach to take.

The great lightning rod, of course, has been stranded cost recovery. The NOPR has managed to balance the interests in this area. It puts competition at the margin, where it belongs. It's not an effort to get out from under stranded costs, but rather an effort to drive us all to make the right decisions in the future and compete on an equal basis. And finally, it addresses the treatment of stranded investment when a load that is currently retail becomes wholesale.

Fourth Speaker:

A great deal of the NOPR makes a lot of sense, as has already been pointed out. We're moving in a very fruitful direction. I think there are serious deficiencies in the framework and the default tariffs that have been suggested by the NOPR. On the other hand, I'm not sure that FERC has the legal authority to deal with those problems. In fact, one could make the case that the solution can only come from the industry. So I hope that all those who plan to submit responses to the document will consider what I have to say.

The problem is a set of assumptions implicit in the NOPR that have to be made explicit. The first is the assumption that it is possible to define transmission services and the non-price terms and conditions for access so that we can have comparable access -- to define those terms and conditions for transmission independent of other discussions about institutions, pricing, and the organization in the marketplace. The second is that not only is it possible to do this independently, but that it is more or less obvious what the transmission services are. If these assumptions were in fact true, we could break down the problem into sequential parts, get the definition of transmission out of the way and allow the market to operate, working on the details of the problems later on.

Even though it's recognized in the document that the contract path model is a poor description of what actually happens in networks, the definition of conditions for transmission services is still effectively based in that model. It's particularly evident in the description of the real-time information networks. We're trying to change the way we think about this problem, and recognizing that the contract path model doesn't work any more, but we haven't yet defined an alternative way to look at it, so the old model

keeps creeping back in.

Some studies that are done across the Eastern Interconnect identify certain sets of lines called interfaces. The contract model assumes that if we move 1000 MW across one of these interfaces, that it doesn't affect any of the other interfaces out there in the system. Now look at the ^{actual} numbers. It turns out that 1000 MW flowing across this one interface decreases the interface somewhere else by 2400 MW. The same thing is true out West, as you can see. So it is clear that we can't look at such transactions as independent third party transactions, because they're always going to affect transmission somewhere else.

This is not news to the industry, and the way the industry deals with it, for example in Southern California, is to recognize that the information has to be centralized. So SCE has been designated as the nomogram manager in Southern California. And they coordinate every single one of their actions so as not to violate the physical limits on the system. This suggests that the scale of this problem is not trivial. It is not possible to define a set of decentralized information without some kind of central coordination of that information in order to allow people to use available transmission capacity.

We have to realize that the contract path model of electric transmission is flawed and the default tariffs and so on which are based on the contract path model are incompatible with the physics of what is happening in the system. That incompatibility is going to make the traditional vertically integrated system collapse in the face of competition and third-party interaction. We have to rethink how we conceptualize the system of newly defined transmission rights.

There are basically two ways to do it. One is to build the system on specific performance and decentralized decisions. I don't think this will survive scrutiny since after a while it gets too complicated to keep track of in real-time. The other way is to approach it through a pool-based network approach where the power flows not according to the decentralized decisions, but according to the preferences that are announced through kinds of bidding schemes. It's now incumbent upon the industry to step up and deal with this as a fundamental network problem and take advantage of this watershed moment. The FERC has provided an ideal opening for doing so through the NOPR process. It's now the industry's turn to act.

Moderator:

You all have in your packet a concept outline of the elements of a regulatory compact for the seamless pricing of wires services. Essentially, the FERC had three options for dealing with the federal-state issues. The first was an aggressive preemption and maximum assertion of FERC authority. The second was to draw some kind of bright line between transmission and distribution, which would coincide with the line between federal and state jurisdiction. Unfortunately, there is no such bright line. They did come up with a set of criteria to try to define the line as a seasonal phenomenon, and the result was a great opportunity for unending litigation. And the third approach, which FERC didn't consider at all, is the question of how we find some way to harmonize the jurisdiction between the feds and the state. So this paper is a first attempt to get at the question of how to get at such cooperation.

Not only are jurisdictional issues not a

question of bright lines, they don't even fall into fixed boundaries once they are set. Not even the distinction between wholesale and retail is really absolute. So there is a clear need to harmonize the pricing of wires services. It doesn't need to be uniform pricing, or even uniform distribution pricing. What's important is not to send conflicting price signals to the actors in the marketplace. And rate-basing of wires services does just that: it sends utilities the signal that efficiency is irrelevant. Now we can't send the right signals under the current regime, where states simply assume all residual revenue responsibility for retail customers, except for the portion FERC has assumed for capital wholesale customers. For one thing, the states will object to being charged for transactions that flow through their wires but don't benefit their ratepayers.

I think this underlines some of the tensions over the years between FERC and the states, particularly inasmuch as there are a number of non-economic factors that really do drive a lot of the state-federal conflict. They tend to relate to questions of equity, and they'll clearly be played out in regard to stranded asset recovery, renewables, planning jurisdiction, DSK rate design and so on. FERC's drive over the last twenty years has clearly been toward economic efficiency over most of these other objectives.

With that background, I think this proposal is conceptually fairly simple; and the mechanism is really less important than the fundamental goals. One is the creation of some kind of federal-state mechanism for pricing all wires services. The next and perhaps most important goal is that the transmission immediately comes out of both retail ratebase and whatever ratebase native load customers may remain on the wholesale

system. All wires services and wires-related prices and surcharges are normally established by the joint mechanism, subject to what I'm about to describe. Now, by "wires-related prices" I'm referring to the intrinsic costs associated with the delivery of power. Surcharges refers to any other costs you want to hang on the wires, such as stranded assets, stranded benefits, environmental externalities, low-income subsidies. The principles associated with the actual pricing of wires services ought to be generally the same. There may be well-justified reasons that these principles dictate some regional variation in transmission or distribution, but the principles should be the same and should be applied uniformly. The role of the joint mechanism is essentially ministerial; it adds the charges on that are determined by the FERC. Similarly, at the retail level, it applies the surcharges dictated by the states. In other words, it does all of the intrinsic pricing and ratemaking, but none of the extrinsic side. The details I've fisted are less important because this is a draft outline and I'm perfectly open to suggestions about the details of the matter.

As far as jurisdiction over new lines is concerned, the states would handle questions of environmental review, health and safety, aesthetics, and so on, but they wouldn't be able to re-examine the need question. And as long as the state proceedings meet the criteria that make them truly open and truly comprehensive planning proceedings, the FERC would defer for some period of time from issuing §211 orders that affect that state. The fundamental goal of this process would be to try to harmonize the rates and try to remove some of the parochialism that tends to appear in the siting process, so that we can move ahead with developing a seamless web of wires pricing that allows the competitive market to operate more efficiently.

: I'm intrigued by the observation that utilities who voluntarily vertically deintegrated might be able to bring stranded generation costs into the federal arena and escape state jurisdiction. Is that really possible?

: It's been suggested that you could use mortgage indentures to do this, but it would involve some significant accounting changes. It can be very difficult if not impossible to manage because of the rights of the bondholders in the generation assets and the various requirements one may have to meet. There's also been a new accounting standard established that makes it more difficult to avoid an immediate write-down in these situations. If you want not to be a public utility, the only option is to be an EWG as defined by FERC. There are two restrictions on the 1992 law that allows this: one, if it's a formerly ratebased unit, FERC doesn't get to declare it an EWG without the advance approval of the state commission, with three specific public-interest findings. And two, there must be a purchase power agreement between the EWG and the former utility owner. So the state commission has two points of jurisdiction before the FERC even gets to consider the case.

Actually, our state commission has already dealt with one such situation. I think the big question will be, what plant gets spun out of ratebase? Are you going to spin out just all above-market generation, or also that generation which is more fully depreciated and therefore priced below market? Obviously state commissions will want to preserve the more fully-depreciated assets for the benefit of native load, especially because of the perception that these customers have

already paid for part of the plant.

I actually see a lot of very large advantages to it, and I think that it is possible to put together a comprehensive plan that can be sold. As a practical matter, one will always have to get the consent of the state commission. But if you package the whole transaction so that, for instance, you're not being selective about the generating assets, but in fact are sending proportionate shares in the three new entities to your existing shareholders, you can present the state with a complete package that includes a commitment to be an honest participant in the My competitive wholesale market.

: How does the tie-in ruling from Cajun vs. FERC relate to this seamless web concept? Are you going to appeal it? If open access or some access to transmission is inextricably linked to paying for stranded costs somewhere, is there an argument around the tie-in charge?

: I believe so.

: You can never ignore a circuit court opinion, but I think the FERC can write its way around the Cajun opinion. And there is a distinct inconsistency between that opinion and **some** of the criticisms that were leveled at FERC for having failed to deal with stranded costs in the gas transition, including Associated Gas Distributors in '87, AGA in '89 and so on.

Subsequent to the initiation of the NOPRs, Congress and Secretary O'Leary have initiated actions toward privatizing the federal power marketing administrations. I presume that that's most likely to result in

privatizing of the transmission systems. I'm assuming it's probably going to result in de-integration of the PMAs. Would such privatization create Transcos that might be privatized and maybe at least retained while the federal government controlled the Gencos? Or would the government's position change at all depending on whether it was in generation or transmission?

: The O'Leary initiative asks Congress for authority to think about how to sell these things. Then all the actual sales will be submitted to the President and to Congress. The other proposal for the PMAs is a four-page bill from a Wisconsin Congressman. It exempts the dams from federal jurisdiction, but not state jurisdiction. I think there will ultimately be some asset sales, whether to a new entity or to the IOUs, if only because the process will be driven by the money that can be gained through such sales.

: How does this relate to the NOPR?

: Once those assets are sold, they will become wholesale jurisdictional assets.

: Unless they're sold subject to some provision or cap on the rates they're allowed to charge.

: It's a very difficult equation. But even if they cap the rate increase, the rates -- if they were purchased by an IOU -- will still fall under FERC's jurisdiction.

: They're already talking about breaking Bonneville up into federal Gencos and privatized Transcos; but I don't know how it fits into the NOPRs, whether you'd have to put a grandfather clause into the contract.

: I think you have to assume that either the

federal power marketing assets will be privatized or the transmission systems will come under the jurisdiction of whoever buys them.

: If the flaw in the NOPR involves two options, the second option being Poolco, which do you think is more manageable? There's a lot of real-time technology that's already being utilized to run those systems. By comparison, how much adjustment will need to be made to accommodate the technical concerns you have?

: There's two broad paths you can go down. One is this notion of trying to literally define what are the physical constraints in the system and to parcel those out and identify who owns them. I don't think that's actually practical, given the complexities involved in using such decentralized decisions. The other path would involve, for example, definition of transmission service based on financial contracts which could be used to hedge differences. And those could be published easily through the real-time information networks, and people could trade them if they chose to do so, because they're decoupled from the physical operation. The actual physical dispatch at the plants would be handled by the independent system operator. Instead of reviewing the options available and then deciding what to do, participants would reverse the process: they would declare preferences for what they would like to do and allow the system operator to make the decisions based on the needs of the system and then notify everyone what the prices are going to be. So that either you get to do what you wanted to do, or it turns out to be cheaper to do it the other way.

Would that accommodate FERC's apparent interest in the secondary markets for reassignment of transmission?

: Yes, because these transmission rights could be tradeable and people could reassign them in various ways. The independent system operator handles the separate coordination, so you don't run into strong interactions between the various physical constraints on the system as you would if those same rights that are being traded were connected with the system coordination.

: The amount of functional unbundling which FERC called for appears to involve organizational separations and some informational and accounting requirements. Would there have to be more comprehensive an unbundling of the transmission function from the vertical integration than otherwise to accommodate this particular formulation you propose?

: The notion of an independent system operator handling the dispatch will be part of the solution to the problem. The control function already exists; we have only to reorganize it so that the people who are doing it no longer report to the utilities, but to some other governing body we establish.

: The ownership could be very complicated while the dispatch is very simple.

: It was really the discriminatory behavior and the exercise of market power that led to the so-called "golden rule of comparability." It seems to me that not all the remedies that address comparability and market power will also necessarily further efficiency. For example, the speaker mentioned energy wheeling as an area where he was concerned that there might be some conflict between the

NOPR and the current conduct in NEPOOL. NEPOOL uses some approximation of marginal line losses to decide which plants to run. Will the NOPR cause people to substitute some higher value for marginal line losses in that process, and would that be a good thing or a bad thing? Further, when we go across control areas, would we be using a different standard from that used within control areas to get the dispatch right? And again, is that good or bad?

The second set of issues had to do with dealing with transmission constraints. There's a particular pattern of out-of-merit dispatch that minimizes total costs. Now in situations where that kind of behavior is required, does a particular proposal get the right distribution of out-of-merit dispatch? And my final question is about locational decisions with respect to generation. NEPOOL did a lot of research with New York State at one point over what it would take to handle the transmission capacity for that whole region. Then later, a new IPP facility was located in New York State for which they weren't compensated. It seems to me that that's another sort of litmus test: does whatever we're proposing deal with that kind of situation and prevent people like NEPOOL losing something and not being compensated for it?

: There are a few ways in which NEPOOL doesn't fit into the NOPR; but I hope we can get the opportunity to bring that into compliance without having to destroy the way NEPOOL works by forcing it into some model that might work perfectly well somewhere else.

: When we were writing the NOPR, we went as far as we could go. And then we got to the point where we'd done all we could

with the document internally and we had to put it out in the world and ask for comments on it. We recognize that we have to work these things out; but to a certain extent the industry has to help us work them out.

: I'm glad we're getting this opportunity to contribute, because there's a balance to be struck between equity and efficiency in deciding on some of these transmission pricing issues. I think the issue that is common to all proposed models is that of defining property rights, and the priority right to use transmission. It's a bullet we've been able to dodge so far because we've never gotten to the point where the transmission system has been so constrained that anything other than economy has been backed off and economy has been deemed last in priority. As we head into a system of disaggregation or congestion pricing or whatever, we'll need to have a better handle on what those priority rights are.

: FERC doesn't have a final answer for that yet. That's why we're engaged in this discussion and dialogue and notice and comment process. Firm is first, of course; even third party firm comes before your own interruptible. That's as far as we've defined it at this point in time.

: One of my questions in listening to this morning's speakers is, how far should FERC go in defining operational issues for the industry? We've been concentrating on the stranded assets and the open access tariffs with comparability. Now the crux of the matter as we go forward will be the electronic information network and the operational issues.

: If I understand the NOPR correctly, part of its intent was to reserve some portion of the

wires for the states to allocate stranded costs if they choose to do so. Now, assuming that state commissions have the foresight to dispose of stranded costs as a distribution wires charge, what happens if a customer appeals those charges to the FERC, on the basis that the state didn't have jurisdiction? FERC would note that the state does have such jurisdiction, based on the NOPR, at which time the customer would appeal the decision to the DC Circuit Court. This could take anywhere from several weeks to a couple of years, while meanwhile somebody is either collecting these stranded costs and rates or somebody is not paying them. What is the likelihood or the outcome of a proceeding like that?

: That's part of the crux of the argument for some sort of joint mechanism to try to harmonize the jurisdiction.

: I think the question has to do with the uncertainty over the recovery of stranded costs. The rates would go into effect subject to refund, approved by FERC. While there are certainly years of litigation inherent in this process, I don't think that the costs are somehow up in the air and not getting collected in the meantime.

: But there's ^{still} the cost of litigation. In October of '88, when my company was still part of Union Carbide, we brought a case for retail service against a Florida utility in another utility jurisdiction. That case is still in the pleading stage six and one-half years later.

I'd like to interject just one minor problem having to do with the collective body you propose to govern the industry. It's

unconstitutional. It couldn't be done even with an amendment to the Federal Power Act, because each member of the group would be an officer of the United States, which means they'd have to be nominated by the President and confirmed by the Senate. You can't have officers of the United States appointed by NARUC.

: I think there are ways around it.

: Someone pointed out that one of the problems in this brave new world will be the retention of state jurisdiction over siting. One of the solutions suggested is to give broader authority to FERC under §211 to pre-empt state siting decisions. I don't know if everyone realizes that there's a strong property rights movement in many states right now, that's part of the current movement to restore power to the states. I don't know that such an expansion of the power of a federal body over the states' jurisdiction could be called politically saleable right now.

: Actually, what I suggested was that where there was a FERC §211 order mandating access and where, as a result of that order, it was necessary to build a new transmission facility, the state in exercising its siting authority could not question the need for the facility. The idea is to insure that the need determination was broader than the parochial interests of the state's domestic ratepayers. In exchange, the FERC would agree to defer on §211 orders, as long as the state had its own planning process that allowed for universal participation in the planning of new facilities.

: I'm not sure the states will buy that, seeing that the question of need is generally

the critical question in these cases, and not that of environmental impact.

Actually, I think that the present jurisdictional allocation makes no sense at all. Why should Pennsylvania, for instance, be in a position to obstruct trade between New Jersey and Ohio?

: Do the speakers have any reactions to the provision in the first rule? This is the one that establishes an initial allocation of capacity rights in which there is a lottery for the identified free capacity.

: The first problem is that the identified free capacity is the difference between a number that we don't know and a number that we can't agree on. But as to the mechanism, once the capacity's been defined, there are three broad strands that you could weave together into a policy: historical usage, an auction for capacity, or negotiation. Because essentially what you're doing is allocating sunk costs.

And that relates to the problems NEPOOL has had in identifying property rights.

: We've had open access tariffs for three years, and we don't have much trouble with constraint problems. Have they oversold the system?

: Well, in NEPOOL there are times that there are some constrained interfaces, particularly across the Massachusetts border. And at times the operators thought that there was sufficient constraint that would justify the building of another transmission line. But when we actually went and did the studies to determine how much out-of-rate generation was occurring in the economic dispatch, it

turned out that what the operators thought was big could only support at most five or ten million dollars of investment. What was really happening was that economy transactions were not taking place, while no contractual obligations were being constrained at all. So the only effect was to reduce the savings through economic dispatch. The constraints never got beyond economy into contracts, so as I said, we dodged the bullet.

: I see there to be two separate issues: One is the assignment of rights, which if you haven't over-sold, you ought to be able to negotiate. The other is the question of how to efficiently price real-time transactions, whether through administrative procedures or price clearing or whatever.

: Either one starts with the assignment of rights -- and in all other such situations, the negotiations have proved impossibly complicated, even if the system wasn't oversold. Maybe it'll only get resolved when enough dollars are involved.

Second Day: Defining, Detecting, and Dealing with Market Power

The special seminar of April 18 further explored the major issues arising in restructuring electricity markets and the concerns over market power. The EPAct builds from an assumed potential for a competitive electricity generation market. However, "it is one thing to authorize a competitive wholesale market; it is another thing to create one." Where market power exists, access to essential facilities will be necessary but not sufficient to achieve the objectives of reform. Market power issues must be addressed in regional generation markets. No simple design can overcome a fundamental concentration of ownership of generation, barriers to entry, or cross subsidies. Any new market model for generation needs to recognize the conditions of market power and provide mechanisms to prevent abuse. The two ends of the policy spectrum for dealing with market power are regulation and divestiture. In the middle of the spectrum are many plausible options that could be implemented to monitor or mitigate any abuse of market power. Policy options must balance imperfections in markets and in regulation on a path consistent with the broader goals of restructuring. The discussion of April reinforced these points and identified important areas for future investigation including the problems of geographic definition of the relevant market and the critical interconnections with market pricing and treatment of stranded assets. There is a need for greater emphasis on the implications of market power and the role of state regulation

First Speaker:

ERCOT is the only reliability council that's not interconnected with the rest of the interstate grid. It makes up about 80% of all the power that's generated and sold within Texas. As a consequence of not being connected with the interstate grid, the wholesale market is not FERC jurisdictional under the Federal Power Act §205. However, §211 does give FERC the authority to reach in to ERCOT to have jurisdiction over transmitting utilities. The result is some overlapping judicial responsibilities. The Tom PUC retains wholesale jurisdiction over sales and transmission of power within ERCOT as well as retail jurisdiction. As a consequence, we were able to craft some wheeling regulations that have been in place since the mid-eighties that have permitted the transmission of QF power across the grid. It's been responsible in many respects for the emergence of QF power within Texas. But it's also meant that as yet there is no true non-QF independent power industry in the state.

There is a bill in our legislature that would for the first time allow non-QF generation to exist in Texas, a fact which may have its own significance.

From a non-economist's standpoint, there are a number of factors that might influence market power: market share, the degree of open access on the transmission grid, and the duration of the flexibility accorded by existing firm sales power contracts. The Herfindahl-Hirschmann index for ERCOT is somewhere around 2500, and I understand that any number greater than 1800 is highly concentrated. Another interesting number is the percent of utility firm purchases from non-utility generators, which is significantly lower in Texas than in the U.S. as a whole.

An even more illuminating indicator of potential competitiveness in Texas is the duration of the wholesale firm power sales agreements: the longer the duration, the less flexibility there is for customer choice in the

whole market. Our rough numbers show that there isn't much capacity that's subject to expiration over the next several years; and clearly that's going to affect the degree of competitiveness of the wholesale market. The telecom industry has what's called a "fresh look provision" in the utilities tariffs, where some contracts can be renegotiated when new services become available. It may be possible to emulate this approach in electricity. Finally, there's the degree of open access on the transmission grid. We want to see what changes need to be made in our transmission pricing and access policies to modernize them and to harmonize them with national trends. But we have to ask ourselves whether that's going to make any difference given the amount of power locked up in contracts.

If our legislature does create non-QF independent power producers for the first time, this will put pressure on those existing contractual relationships to the extent that it gives rise to alternative sources of supply. What effect will functional or structural unbundling have on those relationships? It may prompt the kinds of renegotiations that went on in telecom; but to the extent that the contract stipulations don't allow that, the existing contracts are likely to be a constraining factor on the emergence of competition in Texas.

Second Speaker:

Obviously there are no easy answers when you're trying to identify or define or deal with market power in electricity. I'd like to focus on horizontal market power here, mostly in the generation sector. One question has to do with establishing the standard for judging market power: at what point do we say it's no longer a problem and begin to relax regulatory structures? Whatever form

competition takes is likely to be imperfect in some sense. Friedman used to declare that anything is better than regulated monopoly, even unregulated monopoly. His perspective was that much of the regulatory experience has consisted in erecting bulwarks to protect monopoly and then using it for whatever our purpose is. By comparison, imperfect competition can look pretty good.

Mitigating market power probably makes the stranded investment problem worse, not better. Regulatory barriers to entry are the proximate cause and perhaps the ultimate cause of high concentration. However, assuming that that hurdle's been crossed already, we can look at the tools we have to encourage competition: promoting, allowing choice, and looking at ways of diminishing notions of the exclusive franchise. For example, we need to design standby and backup rates that make some economic sense. We're also involved in merger and acquisition policy on the state level. About fifteen months ago, our state DPU issued an order removing what we saw as a regulatory barrier to efficient reorganization of the existing industry in the state. Taken by itself, such a move could raise the concentration level as ordinarily measured and seem to be anti-competitive in that sense. On the other hand, it may create more efficient competitors.

Our state DPU has also taken on the siting issue. Our state siting statute erects fairly serious barriers to smooth market-driven entry into the generation business. We've tried to rewrite the statute so it provides the necessary environmental checks on the process, but does not presume to second-guess the market in deciding whether generation is needed, how it fits into the resource mix, and the like. Transmission

siting will also fall under this statute. Both these aspects should tend to lower concentration levels in the market. The problem that we have is that DPU regulatory jurisdiction, of course, ends at the state line. From a customer's perspective, it's hard to imagine a truly competitive electricity market if all the options are confined to a single smallish state.

It's important for regulators, as much as they are able, to effect an even-handed treatment of incumbents and entrants -- the so-called "level playing field." Asymmetric regulation should be avoided to the extent we can. Defining the relevant markets geographically and across product lines will be an important and contentious subject. Knowing what the contractual structures are, recognizing transmission constraints, and so on. And recognizing that it's just as important for the sellers of power to have choice as it is for the customers to be able to choose.

Third Speaker:

Vertical market power involves exclusionary behavior arising from vertical control of a bottleneck facility, where a participant in the market controls both potentially competitive segments of the market while at the same time has control over facilities that other competitors need to use to compete effectively. There are a number of potential sources of vertical control.

The U.S. system has historically involved vertically integrated entities which are responsible for providing for the needs of retail customers. The traditional argument for this sort of arrangement has to do with efficiencies in the interdependencies of generation, transmission, and distribution.

However, the present system provides very strong incentives for utilities to take an ownership interest in generating facilities rather than to buy from a third party, even if it's efficient to do so, because we've relied on rate of return regulation where the only way you can make money in the business is to add facilities and put them in your ratebase.

One area where bottleneck facilities (and, as a result, vertical control) have been particularly important is in the area of transmission and network services, which are essentially the connection between the supplier and the consumer. The opening up of the transmission system has been a focus of FERC activity over the past five or six years. However, the states have to define the nature of the obligation to serve. From the perspective of companies trying to get into the business, the state regulatory system could be just as much a bottleneck as the pricing of the transmission system.

Let's assume we eventually manage to fix all these vertical control problems, and we're assured that everybody has free and open access to everything and utilities are either buying from the lowest cost supplier in the market to serve their customers, or we've opened the market up to retail customers to make their decisions. Horizontal market power problems can still arise at a number of different levels. On the plus side, today there is competition on the transmission system and contract path competition in many parts of the country. It's clear that although the transmission network has natural monopoly characteristics, in principle there's no reason we can't use competitive market forces to allocate transmission capacities if it's done in an appropriate way.

Generation as a possible focus of

competition is currently at the center of debate in this country. So the focus of our attention has to be on whether there is market power in generation. There can also be market power in distribution, especially if we look at it using a retail model. Entry into that market is very difficult, as is overbuilding of distribution systems. The only solution to that is to regulate it. On the other hand, retailing is potentially very competitive.

Obviously the FERC's open access NOPR on transmission pricing is designed to solve vertical control problems associated with transmission networks. It tries to do this without restructuring the industry in fundamental ways. There are more aggressive stances that one could take to deal with these problems, and that includes the independent network operator models. Structural reorganization, divestiture, and the creation of an independent grid company all involve consolidation of control areas without any interest on either end of the bargain. But that sort of incentive regulation is actually fairly difficult, because it's not simply a question of getting the transmission operator to minimize transmission costs or transmission prices. You want a transmission system that's designed to minimize the overall costs of bulk power while operating efficiently. Over time we will find that that requires a move away from ratebase regulation toward some other type.

Solving the problems of vertical control must be accomplished without significantly sacrificing the benefits of vertical integration. It may be possible to decentralize some of those functions. The key to introducing efficient competition into the generation market regardless of ownership shares and so on will depend on finding substitutes for real-time dispatch, for

maintaining frequency in voltage, for planning and building new transmission facilities that take account of the network attributes of electric power, in the least intrusive way possible to facilitate competition on the network.

Market power in generation is going to depend in the future on the kind of industry structure that eventually emerges from this debate. But that doesn't mean that our analysis of it can't be structured in an intellectually satisfactory manner. The basic framework provided by the merger guidelines for identify* market power form the basis of that analysis: we start by defining markets. There's a huge number of variables that control the definition of those markets, and depending on the ultimate industry structure, there may be different product markets.

The next step is finding the relevant geographic market, and clearly this will be a real focus of attention because the size of the geographic market will define whether or not market power is a problem. Once that is settled, it is then a matter of economic number crunching to figure out the market share, the HHI thresholds and so on. It's important to realize that these sorts of numerical indices are a bit arbitrary when they are used as thresholds to define market power. The practical effect of an HHI of 1,800, which is the current threshold for determining market power, will be different in different markets.

The important question for us to ask ourselves is, how much market power is too much such that we should continue to regulate prices for generation services? That's a different question from the question of how much market power is too much to allow a merger to take place. Regulation is costly and imperfect, and therefore the criterion for

deregulating a market that we think is potentially competitive should not be anything like perfect competition or a complete absence of market power. The standard ought to be to do better than we're doing now, and the test should be one that balances the imperfections of regulation against the imperfections of competition.

It's important to keep our goals in mind as we introduce competition. The reason we're in favor of competition is that we think it will bring lower costs and more innovation. We think those benefits are going to flow to customers in terms of lower prices, and that will benefit the entire economy. We'd like to have the market work as normal markets work to promote these kinds of goals. And despite the tone of the discussions we have here sometimes, the system in the U.S. doesn't work so badly. As we think through these market power issues, it seems to me that the primary goal in mind should be making it better, not making it perfect.

Fourth Speaker:

Yesterday's session seemed to me to be an exercise in piling up new regulations on old regulations and carving the industry into shares. In the interests of trying to stop and think before we go ahead with the kinds of grand bargains we've been hearing about lately, I'd like to offer what may be an oversimplified view of the problem of market power in the electric utility industry. I think this is realistic and I have tried to build on widely accepted facts and principles.

Start with transmission and distribution. A few people believe that a deregulated wires business would soon be made competitive by the entry of new players and the development of new technologies in

response to the high profit that wires owners would inevitably reap. I suggested that we price transmission services at replacement cost, but it seemed not to be politically feasible. I think there is more merit in that than we thought. The wires business is subject to very substantial market power. Now, the availability of alternative transmission paths may dilute that power a bit, but there are many cases in which these owners of what I'll call an "essential facility" are also owners of generating plants, the very ones with which new entrants are expected to compete.

For the purpose of this seminar, it is useful to explore the proposition that there is no alternative to vertical divestiture if we are to dilute market power sufficiently to have a competitive generating sector. This is true for a number of reasons. First, comparability is not attainable. The dimensions of transmission service are too complex. Second, vertically integrated utilities are not managed by people reared in the ethos of

profit maximization. Third, vertical integration combined with the use of related companies to enter remote markets as independent power producers provides an opportunity for collusion which in my judgement furthers the case for vertical divestiture.

Would vertical divestiture solve the problem of market power in generation? It may be worth gambling that it would. Certainly there would then be no unnatural barriers facing potential entrants, meaning that the possibility of new entry into the market would provide a constraint on the exercise of market power. That's not to minimize the problem of horizontal market power, but I think that it's not the major problem that we face in the long run.

This brings us back to that brooding omnipresence, stranded costs.. These costs demand to be recognized, that historic accounts be squared. They will destroy a potentially glowing future unless they are dealt with calmly. So let's abandon efforts to use stranded costs as an instrument with which to cause utilities to pay for past bad luck or past sins. Instead, let's try to understand just where the issue stands and how it might be resolved in a way that increases prospects for a competitive future.

We're told that asymmetry in regulation is to be avoided. It has been defined as letting a utility suffer for decisions gone wrong but not allowing it to benefit from decisions gone right. But if you look over the history of regulation, there have been times when it has treated utilities more than fairly and times when it hasn't. So the notion that an aversion to asymmetry should lead us to the conclusion that there is unfairness in the possible harsh treatment of stranded assets is, I think, unsupported by history. It's been argued that if it's fair for the federal government to order open access, it's fair for them to protect stranded costs. But surely it's a proper function for the arm of the federal government to protect the competitive process, just as surely as it's not proper for it to protect disadvantaged individual companies. Fairness, in short, is an elusive concept, and I think when you start trying to use it as a foundation for change you're in real trouble.

We're repeatedly told that the recovery of stranded costs is the price utilities demand for moving toward competition, and that they're in a position to delay the process for up to a decade if denied this compensation. It is indeed the case that the utilities can delay the transition for a very

long time. However, it's entirely possible that, having recovered stranded costs, many utilities will nevertheless find themselves unable to compete, and that may be precisely because we shielded them from the consequences of past errors or bad luck.

We know that no economic case has been made for the recovery of stranded assets, but such a case has been made for respecting the sanctity of some IPP contracts. Reasonable equity arguments have been made to support utilities' efforts to recover stranded assets. There is agreement that we want to get to a more competitive industry, and that stranded costs block the path. There is agreement that utilities have the power to delay the transition to competition and will do so unless satisfied. And we know therefore that we are driven to the bargaining table, but I don't think we should confuse the hunt for a grand bargain with the adoption of an optimum public policy.

We also know a few things about what competition means to the utilities. It's competition in which competitors get together and plan how much to sell to whom at what prices. New entrants must negotiate their way to the ultimate consumer through a toll gate owned by a vertically integrated competitor. Customers must pay for the past errors or bad luck of producers. Federal and state bureaucrats must convene and divide up the market for regulatory services. And customers seeking to change suppliers should be fined by the suppliers they are seeking to escape. I submit that this is not a conception of competition that should entice us to the bargaining table. Let's at least make sure we end up with a truly competitive market, one that's worth the price of stranded recovery.

After most of yesterday's discussion,

I was prepared to jump on the bandwagon and ride into the competitive future with Poolco. Then I heard descriptions of the unimaginable complexity of regulation and rulemaking that would be an inevitable result of the process. There must, I thought, be another way. Any defender of market solutions, especially talking to people reared in a regulatory environment, is at a disadvantage. Nevertheless, I'm going to suggest a formula that I think gets us out of this problem. The key is to get FERC and the state commissions out of the way, to transfer authority to the anti-trust division of the courts. The effect is that of a transfer to a forum with a pro-competition rather than a pro-regulation bias, and to **an agency** that can put people in jail for conspiring to eliminate competition rather than insure them against competitive losses.

With the lessons of history behind us, it's clear that we'll never manage to do away with regulation altogether. So we're back to Poolco and coordinated competition. The absolutely crucial thing is to pay close attention to the role of the coordinator. The coordinator must be absolutely independent, and this is an issue in which form is vitally important. The coordinator must have an incentive to make markets as good and as close as those of the dealers with whom it must be required to compete, and should be subject to ^{all} the anti-trust restrictions against collusion and facilitating practices.

: What do you think the minimum is that we need in order to get the structure right?

I think you have to have vertical divestiture, and then wait and see if there's any need for horizontal divestiture.

: I do think retail wheeling is necessary as well, because only that will change the nature of the resource development and acquisition process that **exists**. The building of pools is more difficult because you have to start in some sense from where you are.

: What is really needed, whatever the market model, is an independent network operator that doesn't have biases. I don't think one has to sacrifice a lot of the benefits of vertical integration if that network operator basically takes on some network functions like real-time operation and so on. If you look at the legislation that was passed two weeks ago in Alberta, they basically created a pool with an independent operator without all the physical restructuring that divestiture requires.

: In Alberta, they've created a council with representatives from various groups including consumer groups, to provide management incentives for the operator. All same issues of the operation between the network and the generators would have to be raised after vertical divestiture. It is the nature of the network which must be resolved for competition of any sort to be successful. Perhaps Poolco is a poor name, because the important part is not the hourly spot price or anything but the rules of how you play on the network.

: I don't think we're ever going to be able to completely remove regulation from some residual piece of this system, and as long as we continue to have regulation, we have the potential problem that it will be politicized. I think the best way of making it difficult to politicize in an adverse way is in fact to have many competing interests out there that will find it unattractive to have the system captured in that way.

: I do think that we will find functional unbundling to be unworkable, and that ultimately there'll be some structural unbundling. Whether it leads to divestiture I don't know. I don't necessarily favor retail competition, but once we have a robust wholesale market, ultimately people at the retail level will want the same sorts of services on an unbundled basis.

: Stranded investments are the ghost at the industry banquet because nobody is willing to come up with a way to allocate them. It's very frustrating that no one has picked a utility and found a way to quantify stranded investment for that body. Only California has even tried. Can anyone give me some idea as to how we would deal with it on a utility-specific basis, and how we could get down to specifics in place of generalities?

: The setting of this deal is equivalent to buying a lottery ticket on the distribution of gas prices. People may have different estimates of how to handle that. Meanwhile, the horizontal extent of the market depends on what transportation costs are through the market.

: Can't you make the deal contingent on gas prices?

: Sure. It can be a structure of payment over time, contingent upon whatever you want to make it contingent upon.

: When AT&T finally settled the anti-trust case, they were worried about what would happen to costs that had been allocated to the interstate network for historical reasons but

couldn't possibly be recovered in a competitive world. One of the parts of the deal was a mechanism designed to get those costs recovered through a series of access charges. That was the bribe, if you will, to get them to agree to restructuring. At the same time, the issue of comparable access is still unresolved.

: Stranded investmentsⁱⁿ telecom go under the name of universal service. And the term divestiture was not introduced in my state by a regulator, but by a utility. So the regulators may not have to force it in fact.

: We've been trying to identify market power issues here today; it would be interesting at some point to see what linkages could be identified between recovery of stranded investment and reductionⁱⁿ market power in terms of how regulators craft a solution.

I wanted to return to the networking issues. As I understand it, Poolco is the pool, where participation is mandatory, while Opco simply operates the facility, leaving room for bilateral contracts. How can you have coexistence between bilateral contracts and this "voluntary Poolco?"

: A lot of people are trying hard to make the case that they couldn't possibly be compatible.

: The new Poolco has been developed to accommodate bilateral transactions. Let me clarify the difference between mandatory and voluntary in this case. What is mandatory is if you use the transmission wires and the ancillary services, you've got to pay for them. What's optional is the actual bidding into the pool. You don't have to bid into the pool, but you've got to abide by the network rules. You

can't have postage-stamp, contract-path wheeling. But you can have completely unbundled network services.

: Yes, I think the whole argument has been blown out of perspective by the fact that everybody assumed that Poolco meant the British system. The question comes down to what is an independent system operator? The least common denominator is that you have to have someone whose responsibility is to keep the lights on, which is a non-trivial task that has nothing to do with the market. It has to do with the operational characteristics of the grid. So you've got two functions that could be housed within the same institution -- or not, depending on how you look at it. Poolco in its most liberal definition allows the independent system operator, at the request of a user, to schedule generation in an economical way. While the bilateral market says that the operator need not do that but if, at the end of the day, that's what he ends up doing, that's okay. It's an act of faith whether you think one approach or the other is better.