HARVARD UNIVERSITY

JOHN F. KENNEDY SCHOOL OF
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Harvard Electricity Policy Group

Center for Business and Government
79 John F. Kennedy Street
Cambridge, Massachusetts **02138**

HARVARD ELECTRICITY POLICY GROUP
SPECIAL SESSION

The ISO Governance, Scope and Rules: How Independent? What System? Which Operations?

Taubman Center
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CONFERENCE SUMMARY

The notion of an independent system operator (ISO) offers promise as a solution for many of the difficult problems in providing open transmission access as part of the restructuring of the electricity market. There are significant advantages in this approach. There is wide recognition that there must be a system operator coordinating sue of the transmission system. That this system operator should also be independent of the existing transmission owning utilities and other market participants is attractive in its simplicity in achieving equal treatment of all market entities. Hence, the easy-to-state but hard-to-enforce principle of comparability would be transformed into an easier-to enforce principle of non-discrimination. However, the precise goals, criteria and options for the ISO are not well understood or well posed. The tension is clear: the ISO should be independent but also responsive; stable but also flexible; limited but also substantial. The scope of responsibility, rules for operations and decision on who should decide define an agenda of important details that are being examined or overlooked, decided explicitly or adopted implicitly in intense parallel conversations in different regions of the country. An investigation of the governance, scope, and rules for the ISO presents an opportunity to unify seemingly independent conversations that are or should be about the same thing, namely how to deal with the special characteristics of electric networks in order to support a competitive electricity market.

First Session: Governance, Scope and Rules: Goals, Criteria and Options

First Speaker:

There are three themes to my presentation. The first theme is that there are three dimensions to the problems associated with electricity restructuring:

1) The *technical dimension* -- about which we've had a lot of talk and agreement.

2) the *economic dimension,* about which there has also been a lot of talk and a lot of "dismal science". The issues here revolve around whether or not we can assume a market and move on from there. That debate has crystallized in two camps that we are all familiar with and that we're not allowed to discuss for today, so we'll see if we can last for 10 minutes without discussing it.

3) the *political dimension* - this is the issue that brings us here today. Politics has yet to be discussed in detail because up until now this has been an insider debate. As we move toward implementation of proposals, we are finding that there are people who don't care the technical and economic details. Politics is beginning to rear its head. Unless we, as the insiders, recognize the importance of politics, we will end up with the proverbial two-legged stool.

This leads directly into my second theme. The issue we face is not how to start, but rather how to create a structure that is governable, changeable and flexible.

The third theme is that it is impossible to discuss governance without discussing what the ISO is and does -- different functions require different governance models. When we get to thinking through what the governance structure should be for controlling a particular vision of an ISO, we may come back saying the ISO should not take on all that because it will result in an ungovernable situation. What are the consequences of some of the ISO proposals from a governance standpoint? How does that feed back into what it is that we want the ISO to do? In the remainder of my presentation I will define my preferred model of what an ISO does and then I'll work through the governance consequences of this model.

I believe in a minimum ISO that does only what is necessary. In this model, the ISO does not do central "economic dispatch" or a settlement function.. The ISO does not run, and is not connected in any way, shape or form with, a spot market. That doesn't mean that there isn't a spot market, but it has nothing whatsoever to do with the ISO. The problem that we should be trying to solve is not optimization of instantaneous marginal cost. The real problem that restructuring initiatives are trying to solve is how to change the fixed cost structure of the industry, not the variable cost. The problem is not so much which unit gets dispatched, but which units are available to be dispatched. That premise leads me to a different solution than trying to get the last one-tenth of one percent out of instantaneous marginal cost through some form of centralized economic dispatch.

In this minimalist model, and especially in this area where no one state is the master of its own destiny, there has to be a regional governance model under a political board.

The easiest way to structure that board is to have the governor of each state appoint the chairman of his or her Public Service Commission, because the PSC or the PUC isn't going to have a whole lot to do in this new world. These PSC chairs will form the over-arching Governing Board. Underneath this board, there should be four standing committees.

The first is a Market Operations Standing Committee. This committee will look like NEPOOL. It will give market participants a place to get together and discuss operations issues without worrying about antitrust concerns. There will probably be a standing lawyer, who will ensure that there's no collusive behavior. There has to be some place where people who are actually working with the system every day can sit down and discuss what's right, what's wrong, what do we need to do better, what needs to be changed, and to reach some sort of a market consensus about the answers. However, if we depend upon a consensus process, we're going to get nowhere, because we're unlikely to achieve consensus in this committee where one person's monopoly rent is another's potential market. But it should be a place where these issues can be brought forward, defined, argued, vented, and so forth in a cooperative way.

There also has to be another standing committee called the Dispute Resolution Committee. This is an extremely important function in the minimalist model. The more we depend upon bilateral contracts, the more we're going to need a mechanism to adjudicate disputes early, before they escalate. This should be a forum where people who are not party to the bilaterals, but who feel that they have been harmed by the network effects of bilateral contracts, can go, again, early and often.

The third committee should be a Planning Committee. This committee should provide a place where the great unwashed -- people who don't have a seat on the other committees -- can come and talk. Large regional issues and long term planning will be discussed in this model.

All three of these committees should have input into a fourth committee called the Compensation Committee. This committee will be responsible for hiring and firing the actual ISO. The committee would be chaired by the chairman of the governing board, or maybe rotated between PUCs over the years.

Consider another version of the ISO, the kind that does do economic dispatch and is very closely connected to a spot market, and has locational-based marginal cost-pricing for transmission. What happens to the committees under that sort of a model? The market operations committee all of a sudden becomes a very different beast - one that could easily facilitate horizontal market power, not only in the aggregate, but at each node. Horizontal market power will have to be watched closely at each and every node each and every day.

Vertical market power is also a problem in this model. This refers to the self-dealing or contracts for differences with generators. By definition, that contract for differences is not known to the pool, but it is what sets the revenue requirements, and it is the mechanism by which we can pass the risk and the revenues between the unregulated generation sub and the regulated distribution sub. The world where risk and money can be passed back and forth between regulated and

unregulated parties needs to be proactively policed.

In this model there are potential problems with horizontal and vertical market power as well as collusive behavior. This industry will never be a mom and pop, Adam Smith model, with 10,000 participants. At best it will be an oligopoly, with two or three players which will have market power. It will be difficult to challenge them in this capital-intensive industry. Thus, regulators have to be careful about collusive behavior. In this world, it is likely that the dispute resolution committee will be important because, over time, you're going get people who get really mad, and they're going to run down to FERC.

The planning committee is going to be much more important in this world because you don't have the chaos of the market to sort of help you do your planning. The planning committee is going to have a lot more responsibility for day to day operations- it's going to have to be much more plugged into the system. Finally, the compensation committee probably won't be nearly as important in an ISO maximalist model as it is in the minimalist model.

Second Speaker:

The term ISO has many different definitions around the country. Of course, in California it's a group of diverse stakeholders whose job it will be to lease the transmission from the utilities, negotiate tariffs and to hire what other people call an ISO to actually run the control center. In PJM proposal, the ISO is the existing PJM interconnection office with a slightly revised board. a very good concept put out early in the game was the concept of an independent tariff administrator. That concept was immediately corrupted, it's now known as ISO Light. There is a dramatic disparity in what people mean when they use the term ISO, and I wish people would drop it so that we could communicate better.

Ultimately the goal is to address vertical market power issues. We need to find a way to ensure that the transmission is in fact the common carrier. There have been a series of responses on how to guarantee commonality. First, with open access, non-discriminatory tariffs, which are administered properly, that is all that is needed. At this time, compounding tariffs in a relatively small area was a secondary issue. Following this, the idea of functional desegregation or "ISO Light," developed. Then came the California concept, which was an ISO hiring something that we might call an ISO operator or "Accountemps".

It is important to note that I am coming from the perspective of a person who wants to make a business out of this. The last thing I want to do is to run an office cleaning service, an "Accountemps" function. I can't make a business and provide a service if all that I will do is have an annual contract to "serve" as an ISO operator. It is important to build an organization that provides some stability of employment, training, some cross-fertilization in the growth of people and systems - a full service ISO.

What is this organization going to do? It's function will be similar to the FAA control tower function. The controllers don't operate anyone's airplanes, don't operate anyone's airports. What they do is make sure everyone adheres to a common set of ground rules and pay attention to the control tower to keep them from crashing into each other. The ISO

will be similar in that it will serve a strict market clearing function based on a set of rules, tariffs, and procedures which are defined in publicly approved documents. I imagine that the ISO will use the same rules of reliability that exist today. The ISO should be independent from any potential bias. This implies that the ISO will have no relationship to any generator or distributor and no interest in any market transactions. However, while ISOs will not want to own transmission, it is likely they will want to own security, telecommunications, and telemetering equipment. In addition, they may want to demonstrate to their customers that they have multi-contract commitment to this concept. In other words, they will have a number of ISOs, allowing the ISO to provide training, build institutional knowledge and experience in various markets.

Policy makers must take care not to build another institution whose profit motives are such that we end up with some of the same problems we face in the industry today. This needs to be a profit-making business which inherits some of the risks and meets certain performance standards. In addition, this is a good organization to coordinate regional transmission planning with the input of all stakeholders. It isn't necessarily endemic to the concept, however, it's something that some party will have to perform. The business would be a private company, have its own board of directors, but still be watched by an overseer, similar to the role served by the FAA. This simple organization, independent by its character, and by the tariffs, rules and procedures that it follows, is all that is needed.

Third Speaker:

Let me begin with two stories.

In one of the power pools in operation in the United States today, a number of IPPs have power sales agreements that allow the pool's operator to override the plant's non-dispatchable operations if reliability conditions so require. Until recently this has happened about five times a year, but in 1995 it happened 50 times. The IPPs in question wondered whether this was consistent with the terms of their power. sales agreements. They asked the utilities to which they sell power to provide pool operational reliability information because they wanted to see some documentation of the reliability conditions that were leading to the frequent interruptions and the change from five to 50 in one year. This problem goes right to the heart of the independence question. The utilities told the IPPs that they could not provide the requested information because it had to do with pool wide operations and therefore it was proprietary to the pool. Now when the IPPs turned to the pool for the information, they were told it was proprietary to the members of the pool. Needless to say, this was discriminatory behavior and it continues to go on.

Let me give you a second example. In another region where the electric power market is being restructured, several utilities want to collect the above-market operating costs associated with generating units that they say must run for system reliability. In this region the utilities govern the practices of the system operator and it is their job to determine which units are must run. In both these cases the power pools have set policies and rules approved by the FERC, but the rules are out of date with the policies of a FERC that is promoting a fully competitive wholesale electricity market with non-discriminatory access to transmission as an essential feature

of a competitive regime.

These stories are important because they exemplify why independent suppliers in a competitive market care about how the system operator makes choices on issues that are more than just technical. In fact, these cases demonstrate what all the discussions of technical gymnastics obscure. There's big money at stake and, if you control the electricity highway rules and information, there's big money to be made. In fact, the more I understand of how much money is at stake, the more I question the story about the technical demands of the system requiring unerring central control and the fact that they must dictate the form of the ISO. One of the questions that I am interested in is how you explain the success of loose pools. If they don't experience massive blackouts and burnouts due to loose coordination, is this possibly an indication that market forces and independence might not end in total disaster for us?

I don't think the technical issues are really so complicated that the ISO can't be subject to market forces and independence. The more that the parties who run the ISO have a financial stake in the system, the more it is likely that the system will be gamed, and the more incumbent it is on regulators, especially the FERC, to maintain careful regulatory oversight.

FERC is in the position to require all parties on the ISO to have the same rights and pay the same rates for the same service. FERC needs to promulgate some basic rules here and now in order to ensure that this occurs. For example, FERC could have some basic rules about criteria that an ISO must meet, whatever its form and structure. Rule number one might be: The rules governing the ISO should be transparent. Rule number two: Implementation of the rules should also be transparent. Rule number three: The governing and operations process should be open. And rule number four: There should be adequate recourse to the FERC to lodge a complaint if the ISO engages in discriminatory behavior.

With these goals in mind, let me discuss a number of structural and governance options, some of which have already been mentioned today. One option is the association of transmission utilities, based loosely on the RTG concept but organized more formally. Association members could set forth policies, practices, agreements and tariffs for approval by the FERC. There would be no separation of generation assets and interests from transmission interests, so long as association members continued to have both functions within their corporate umbrellas. The downside of this option is that heavier regulatory oversight will be required to ensure that standards of fairness and efficiency are met. Also, it creates incentives which are counter to the goals of a totally competitive marketplace.

A second option is a transco, where a new independent utility company would be established, having acquired the existing transmission assets in the region. The new company could be profit, non-profit, or even a public authority such as the Tennessee Valley Authority. To ensure consistency with goals Hof efficient system operations and comparable transmission service, again, I would believe that the transco should be FERC regulated to temper the entity's monopoly power as well as its politics.

A third option is the independent grid operator, similar to what the previous speaker described. It would enter into agreements with current owners of transmission to operate their facility and collect revenues through tariffs to compensate the owners for such use. This affords several ways to ensure future independence. For example, the ISO could be authorized to build lines in the future, ensuring that no transmission owners unreasonably withhold such facilities. It could create economic incentives to motivate the efficient development of any new facilities when system use warranted such expansion.

For each of the options described above, there are different benefits, impediments and legal considerations, and of course the devil will be in the details of any one which we pursue. Of course there's no perfect structure and governance. What is clear is that the more the entity is attached to or governed by players with a financial stake in the generation market, the more FERC must actively guide, oversee and ultimately intervene to ensure the absence of bias. Recently, the California PUC addressed this question and decided to establish a system operator with no economic interest in any particular load or generation assets. California seems to have been on target with respect to the independence question. FERC can play a more aggressive role in advancing the development of institutions that afford non-discriminatory system operation. What's been done at the FERC with respect to its action on pooling agreements indicate that FERC already understands the connection between ISOs, open access transmission and other elements necessary for a competitive market.

The so called "Pool Plus" proposals are not going to be anywhere near enough. Preexisting compromises, deals, and relationships preclude the kind of change needed from within to meet the demands of the competitive market. The mind numbing RTG process in New England comes to my mind as how the process is likely to proceed if there is not some rules that are published to guide the it.

Here's the bottom line. Should the FERC decide that the ISO need not be separate from those with a financial stake in the generation market, then the FERC and all regulators must be willing to play a sustained and appropriately strong regulatory role in the future to prevent discrimination. Otherwise, as I like to call them, the high priests of the holy grid will continue to murmur those unintelligible words, P2C2E, which if directly translated means process too complicated to explain. But if properly translated into everyday English, P2C2E really means double thanks for monopoly rents.

Fourth Speaker:

The conversation so far today has indicated that there are a number of vastly different ISO concepts. This is because different regions, different companies are trying to solve different problems using the same mechanism. I am going to describe the *objectives* my company, an vertically integrated utility, have in forming the Northwest ISO proposal.

The first objective is to solve is what might be called the market freedom problem. We understand that generation transactions will have to be separated from transmission in order to get that freedom from regulators. However, we want to have the freedom to compete in both these markets. The second

objective is to facilitate the gains in economic efficiency that we believe can be obtained from the transmission system itself That is, that we want higher utilization of existing transmission facilities, and reduced cost of construction of new facilities. Another objective has to do with the development of wholesale markets for electricity. Because there has already been a very active wholesale market in the West, the question isn't whether or not there could be a market, but who gets to participate in the future. Finally, we want to provide incentives to reward technical innovation by the operator of the transmission system.

The Pacific Northwest Coordinating Council has begun to define the options available to meet these objectives. Four vastly different options were settled on. The first was a transmission coordination agreement, which would be a super RTG. This option has largely been discarded. At the other end was Transco. Transco probably isn't realistic in the short run because nobody can figure out how transfer the assets. Thus, there are to two IGO, or independent grid operator options, IGO-Limited and IGO-Owner. The term "grid" was chosen because there's an aversion to a central market by almost everyone in the Northwest.

The following are the functions that we want the IGO to have. First , it would operate the transmission of the existing owners. It would provide tariff service to both owners and users and would manage transmission system loading and usage, some people call it scheduling. Second, the IGO would be responsible for controlling O&M costs by setting maintenance standards centrally. O&M budgets would be submitted by current owners and, if necessary, prices would be negotiated down. The IGO would also be responsible for scheduling maintenance operations. This function is important because you want to make sure that the maintenance is scheduled so as to maximize the use of the network and without raising congestion costs. The IGO could plan the system upgrades and perform regional planning functions in coordination, perhaps with the RTG, where the dispute resolution could reside.

Under the IGO-L model, the current owners would be required to construct new facilities. I suggest that the IGO be given the responsibility of operating and meeting "211 responsibilities." The "211 responsibilities" are a code word we've used for operating an open system from the existing facilities. However, the IGO limited model has the problem that it really can't fully take on this responsibility because it can't build anything. The second incarnation of the IGO is the IGO with the ownership option, IGO-O. The IGO-O would still invite current owners to construct new facilities, but if the current owner's bids are too high or if they decline to build for whatever reason, then the IGO has the authority to go ahead and raise the capital and build the new line.

Fifth Speaker:

I will focus on the implications to organization of attempting to minimize the total cost of transmission. By minimizing total cost I mean eliminating unnecessary construction of transmission upgrades, replacements and additions; avoiding over-maintenance and uneconomic reliability; reducing overhead cost by using incentives to attract highly cost conscious management; and generally, about resisting the tendency of regulated monopolies to incur excessive labor and excessive capital costs. In short, I am

addressing the danger that cost savings from increased generation competition and efficient pricing may be partially dissipated through excessive overall transmission costs.

I have two propositions, one which was mentioned by our first speaker, and the other which hasn't been discussed too much to date. The first proposition is that the current proposals to corporately separate transmission functions, and I don't mean functionally separate - I mean corporately separate transmission functions, threaten to cause increases in the total cost of transmission for any level of services. The second proposition, mentioned earlier, is that the organizational form chosen for the ISO may profoundly affect the ability to minimize total cost.

Regional ISOs and corporate separation threaten to increase the total cost of transmission for two reason. The first derives from the fact that under a lot of the proposals, the economic impacts of owner decisions on construction and maintenance of transmissions would be more regionalized than they currently are. Today, most of the cost of transmission falls on the company that's making economic decisions about transmission. Under an ISO structure, it's not at all clear that will continue to be true. Owners will have systems that will be merged, you will have nodal, zonal and other rates that affect many players. Excess charges may or may not reflect individual costs. The second reason concerns the effect of ISOs and corporate separation on transmission cost. There is a risk that if corporate management

of transmission is separated, the accountability, the pressure for accountability in budgets and in spending and in cost cutting may be diminished.

What are the implications for an ISO? First is the basic principle that we need to find a way to ensure that we have maintained the connection between costing decisions and their consequences. Second, in the absence of competition, a second-best solution may be a form of cost-capped incentive regulation that gives a substantial reward to decision makers who reduce the total cost of their transmission systems. The most obvious solution is the creation of an independent for profit regional transmission company, a Transco. That company would be well capitalized, would be responsible for all bolt transmission cost, would have an opportunity to make a high return if it achieves substantial cost savings. This option has been thoroughly researched, including the legal problems involved with it, as an option for the benefit of the Northwest investor owned utilities. This option is a practical option, not through sale of assets but through a corporate spinoff and merger transaction. However, when the thought was made public, a panic set in and criticisms that the proposal was legally complex, it can be financially painful for people under their first mortgage bond indentures, and it is certainly wildly unpopular with many stake holders. Despite this, it may be in the best interest of the public and of utility stockholders and deserves better attention.

The IGO-O the previous speaker described would be empowered to make total cost decisions, including maintenance decisions, including the ability to determine when new transmission gets constructed. If accountability goes with authority we will need to develop incentives for the IGO-O incentives that work. What this may imply is that the IGO may need to be an independent for profit company if it's going to respond sufficiently to regulatory incentives. Secondly,

and this was stated earlier, if it's going to make important financial decisions about other people's assets, it's going to have to have the substantial capital to assume the financial consequences of those decisions. It's quite clear that no transmission owner is going to turn over the control of these decisions to an entity that can't stand behind it's mistakes. Note that this kind of an organization stands in sharp contrast to what's being proposed across the nation, which is generally a non-profit corporation, or government corporation, nominally with independence, but with the total cost decisions remaining with the transmission owners individually or collectively being made by the owners through contract.

To give an example, compare the PJM pool ISO with the IGO-O model. On short term decisions, which has been the focus properly to date, both models have the ISO controlling scheduling of transmission service and arranging of ancillary services. Indeed both have the ISO approving short term section 211 requests. However, the obvious and fundamental differences that affect total cost are the differences in who sets maintenance standards, who approves maintenance budgets, who approves maintenance schedules, who decides if new facilities are built, who sets the budgets for new facilities, and who would build the transmission if the host utility declines. In all those cases the IGO-O would be responsible but that would not be so in either the PJM pool model or most any other pool model that has come up to date. Note that the non-profit status of these pools and their lack of authority are inextricably tied. Without financial incentives and without financial responsibility, the ISO cannot reasonably be given the right to dictate the budgets of the transmission owners, and in that respect, having chosen a non-profit pool, PJM has no choice but adopt the ISO form that they have.

If we agree that we would like to try to create a well capitalized for profit IGO, we're confronted with the fact that the IGO owns few assets. This raises the question of how, as a practical matter, to create an organization that encourages the kinds of efficiency gains that you want.

One option would be to go to the Federal Energy Regulatory Commission and ask for cost-capped incentive regulation for an ISO. Perhaps we could ask that cost savings achieved be kept for five years. People hate to let entities keep money and make a good profit but the fact is it's found money and it's an excellent incentive. The owners would then create and substantially capitalize the IGO-O with their own money initially. However, the stock would initially be placed in a voting trust so that the owners couldn't control it and there would be an absolute commitment to making an initial public offering of that stock within 18 months. The obvious point is to the extent that the structure in the ISO achieves cost savings and thereby realizes the benefits of incentive regulation, those savings would be capitalized in 18 months by the transmission utilities. This would give an incentive both to the ISO going forward and to the utilities in the short run to make the kinds of system changes that would reduce total cost. Finally, a for profit ISO only makes a lot of sense if we can make it workable.

General Discussion:

<u>What role? What Functions?</u>

It is my belief that the central economic

dispatch model that has occurred, at least within New England, is in fact a least-operational-cost dispatch. Moving away from that model will come at least a cost. While I understand that the minimalist model may in fact may be more equitable (in terms of reduced likelihood of gaming) are you also arguing that it is the lower cost model?

You can have central economic dispatch and meet my concerns about who decides who decides. They are not mutually exclusive. The rules need to be open and transparent, not necessarily minimalist. Our view is that the more you tie the financial stake in generation to those who run the transition, the more incumbent it is upon regulators to be vigilant because it is more likely that the system will be gamed.

The first speaker said that optimization of marginal cost was not the issue, that fixed cost was the issue. I think you're wrong. The issue is open non-discriminatory access to the grid which immediately implicates existing fixed costs, and you have to deal with that. But that is a transitional issue. After you deal with that issue up front, you will be faced with a system which can't accommodate all the uses requested of it . You end up back at the long-term issue that must be dealt with -- the optimization of marginal cost. You must decide who can use the system in the inevitable case when it's simply not capable of handling all requested uses. That can be done on a rational economic basis and that is the optimization of marginal cost.

I agree, as long as your definition of long run marginal costs includes short-term investment decisions.

Handling Transmission Congestion

My question is for the first speaker. You proposed that we will largely be dealing with oligopolies in the generation business and went on to say that if there is congestion in the system, people will deal with it and it will satisfy itself I want to know how you deal with congestion in your minimalist ISO model. How do you force the players who have market power to deal with congestion and how you make them not game the system? How do you enforce those rules?

In order to distinguish between competing uses of the grid in a given hour or a given day, you are going to need a competitive auction to use that grid.

The issue is not so much how variable is it but how predictable is it. If there is congestion and it's unpredictable, then a market solution would be problematic. However, congestion is extremely predictable. Therefore, people can deal with that in a market context. They don't need the central dispatch.

This is an empirical issue related to how predictable congestion is. If congestion is predictable, you can deal with it with zonal tariffs which will get you the same results, in terms of marginal price signals, that you get from locational based schemes. If it's not predictable, then you've got a problem. Thus, the question is not "does congestion exist", but is it predictable. I think the answer is different depending on where you are. I would suggest whatever the final answer is, congestion is a lot smaller of an issue than a lot of people think it is. There is a lot of money at stake causing people to make sure that the congestion hurdle is really high.

I have a hard time seeing how market power is any different whether you are in a minimalist model or a maximalist model for the ISO. It either is or it isn't. And in fact, a congestion model makes it more transparent when it is.

Long Term Planning

My concern is that those who get involved in long-term planning, by default, are involved in making bets about how the regional system is going to evolve and what the economic trends are going to be. If people who have made those bets also have significant responsibilities for the operation of the grid in the short-term (i.e. the **ISO), I** am concerned that they will run the grid in the short run to make good on their long-term debts. I haven't yet seen why we need to add this as part of the to-do list for the ISO.

The ISO should not perform, but rather coordinate regional planning. That is, planning will be done by transmission owners but the ISO will help them impart some regional coherence to it. That's done informally to some degree now, but in a way that doesn't take into account the interest of a lot of stakeholders. An ISO should not do the regional planning at all because it won't build anything and it really can't enforce anything.

The responsibility for long term planning *should* reside with an ISO. There are two ISO constraints which might mollify your concerns. Number one is this price cap regulation. The second is the limitations put on building by the public. Anybody who has ever tried to build in transmission lines, know that you have to go through the EIS process if it's federal lands as well as state processes. If you want to build across private property, you've got to make a substantial case to obtain condemnation. Because of this, no one can build anything they please. The big planning effort in the next 10 years is being based on small, incremental changes.

ISO Accountability & Compensation

I don't understand why it is necessary for the ISO to be such a financially strong entity. Take the FAA as an example, it very clearly has well-defined rights to impose major costs on the firms that participate in the airline industry in the name of preserving safety and reliability. Are you proposing that in your ISO would in some sense never have such a right? Does it always have to pay market participants for any cost it imposes on them.

No, an ISO should not pay for the costs it imposes, but it should pay for its mistakes. The flip side, it seems to be of creating an economic incentive so you make money if you do things right is that you lose money if you do things wrong. If you want to over book the transmission system effectively because you believe that you can get more throughput, there may be some real displacement costs to be paid. The party who makes that decision ought to pay the displacement cost. Moreover, utility managements are not going to turn over the right to dictate their investment decisions to somebody who is not responsible for the consequences of those decisions. Obviously our government can come in and mandate that a utility take certain actions, whether it wants to or not, but people don't often do that voluntarily.

What are the committee jobs the first speaker alluded to? The Market Participants Committee, for instance, what are they doing in a minimalist ISO that has no market

functions? How important is it to avoid the pitfall of assigning people jobs of coordination without the authority act after that?

I'm not trying to suggest that the model that I drew solves the problem you point out, but at least it tries to be responsive. What we are all saying, in different ways, is that the real authority to actually make things happen comes through the mechanism by which the ISO is compensated. The compensation committee's real job is to define what the PBR is if there is a PBR and what is the price cap. That is a regional function, not a FERC function and not a state function. There is no question that committee's are problematical . However, committees have some value. The only reason the committees for the regional transmission counsels have worked today is because they didn't make final decisions. The people who had dollars on the line made the decisions - the RTG was a place to build consensus. Committees can be useful for dispute resolution and some other things but not for making operating decisions. An hourly dispatch system cannot be run be committee.

I have heard a very strong series of statements that the ISO employees and management have to have a financial stake in how well the system works or they won't do their job well. And it makes me want to go back to the FAA argument, are you folks just arguing that we just don't know how bad the FAA is because they don't have a stake in whether United Airlines is making a profit this year?

Is a transmission system the FAA or is it the railroad? Because the railroad doesn't care whether or not United Grain shippers makes money. It just cares whether it gets paid to move the trains -- to transport the product. I think that's a different model than the FAA.

ISO Independence and Balanced Governance

Is there anybody on the panel that would disagree with the premise that either the ISO or the owners of the ISO or the governing body of the ISO should be independent of those that are trying to gain access to this system (the generators)?

No.

Then, you agree that they should be independent? OK. Everybody agrees with that. I am then curious to know, should this ISO be independent of the distribution system?

: **Yes.**

What does independent mean?

It means, first, no common directors and no common officers. Second, no interest in the market. Third, no dollars invested in those products. And fourth, the critical question that has to be asked about independent is independent in what regard? Should the ISO be independent of the owners of transmission?

The question is how close can you get to mimicking that system without making the asset transfers. That's what the IGO-O model is trying to do - get as many of the benefits as possible from the Transco without having to make the asset transfers where we run into a substantial number of transitional questions we can't answer.

I do not agree that independence should mean that if you own any share of a generator you can in no way be involved in the

governance or committees. Generators need to be involved, we just don't want any entity to be able to control the system. We need to be able to force negotiations between all interested parties at the ground floor and, hopefully, get the lowest cost form of dispute resolution. Otherwise, FERC will be busy with far too many disputes that will come up.

The real key is to balance governance. Marketers, generators, transmission-dependent utilities and industrial and integrated utilities need to govern the minimalist ISO. The issue of physically spinning off into separate corporations is not nearly as big as the mortgage bond issue. Based on the experience of the natural gas industry, regulators should mandate a minimalist ISO which has balanced governance. The key to dealing with market power was creating separate organizations and regulatory reporting requirements and including a complaint process to the FERC.

There is an analogy to our current problems in the gas industry. They had a process where the producers, the pipelines, and the LDC's got together and created electronic data interchange standards for scheduling and allocation of the system. The key to its success was equal governance from all three groups involved. A central clearing place for economic dispatch is not necessary because the marketers are extremely efficient. The salesmanship of the many different niche marketers and power marketers that will develop will make sure that the most economic units are dispatched at all times. If you trust that process, it will work extremely effectively.

In summary, restructuring objectives can be met in three steps: 1) Deal with market power. 2) Deal with comparable access while maintaining reliability and 3) make sure that the market facilitates economic dispatch. You can do this with a minimalist ISO and incentive regulations which will get electric utilities to combine their transmission systems into independent transco operations.

What does "balanced governance" mean? Who has the money to sit in all the processes needed to make "balanced governance"? Who doesn't have a day job so that they can end up on all of these committees? Whoever wins in the "balanced governance" process will not balanced at all. Balanced governance is really a regulatory function, the ultimate form of independent governance. Governance has to be completely separate from day to day operations. An hourly spot market can't be run by a committee.

The idea of the balance interest seems attractive because we are used to it. However, if a trucking company representative were asked how route placement decisions are made, he wouldn't say "We put all the people who use the service in committees and if a majority of people on each of the committees agree that we should add a route, then we do it." The fact is that this kind of a structure may keep people from doing something that is harmful but it also can keep people from doing something that is helpful.

It would seem to me that there are two ways you can approach governance. The first is to allow no one with any financial vested interest in generation the ability to participate in ISO governance. The ISO then makes decisions, with transparent rules, which can have large dollar impacts on these players. Guess what -- FERC is going to have an awful lot of powerful people coming to them to say "we don't like the decision that was made

because of the large dollar impacts. We believe the decision was arbitrary, capricious, whatever." The second model is to allow players with financial interests to be part of the governance, and, therefore give everyone a chance to to resolve their difference at the ground floor. Then, if parties still have disagreements after their negotiations have taken place, they can go to FERC. In the second model, interested parties have an opportunity to negotiate before creating rules and prevent excessive complaints to FERC.

The way I interpret that is as follows - let a star chamber make the rules and then if people don't like it, they can eventually go to FERC. That suggests that there is going to be a long period of time where the IPP will be at a potential disadvantage in the marketplace. It isn't necessary to rule out a relationship between generators and transmission, but it is incumbent that the rules be established up front as to what this new transmission entity should look like. With respect to the market, the ISO can be part of that market, and we believe that bilateral contracts are going to be as effective in maintaining price signals and efficiencies as a central economic dispatch model.

A concern was expressed about **IPPs** not being involved in the rule-making processes with various power pools. What are some of your thoughts on how this might be remedied through ISO committee representation and voting rules?

At the moment, I would say that the solution is to have FERC issue some rules and leave the details to be fleshed out as we go along. That rule should make the process open and transparent, so even if a particular party is not on a committee, it has access to the information it needs to evaluate whether or not it has been discriminated against. A seat on a committee would definitely be an enhancement, but it is a long, slow boat before I ever get a peek into the star chamber.

Second Session: Governance, Scope and Rules: Theory and Practice

First Speaker:

I will talk about the ISO proposal currently under discussion in the Midwest. First, there area variety of operating duties assigned to the ISO, many of which have belonged to the control area up to now. The duties fall into two categories. The first ones are those that depend on ISO independence, such as calculating available to transfer capability. To Mid-America Interconnected Network (MAIN), who have performed this function twice a day for a long time, the changes are simply a matter of assigning a third party to do it more frequently, and this seems quite right. We do, however, insist that there not be two parties doing this as the person who has two watches never knows what the right time is.

Individual companies and states can do planning, however this isn't enough; regional planning is also necessary. The ISO is a very good forum for such a thing. The ISO will not necessarily be the planner; however, the ISO can supply the independence necessary for coordinating the planned functions. Thus, the coordination of maintenance should be done at the regional level, but maintenance should be performed locally. There should be regional monitoring of transmission systems, but we also think there is a lot of monitoring which needs to occur at the local level, or else the duties will swamp a large ISO. The monitoring of transmission performance should be a collaborative process. For example, the ISO should direct emergency action. The control areas will take the action and be responsible for restoration of the system. That activity does not belong with the ISO, rather, it belongs right there where the people are very familiar with what is going on.

We need a governance structure that is actually quite simple, but one that is effective. It could be either profit or non-profit. If it were non-profit, it would avoid the risk inherent in an ISO's search for profit. It could also be an administrator if the federal government happens to be the transmission owner. The ISO should be independent within certain bounds. The bounds would be the tariff structures and the principles under which it functions, as established by a Board. The ISO ought not to be the bidding society for guides and principles; an operating entity cannot have a debate society telling it how to work. It ought to be the implementor, the operator, the administrator. Interest group participation comes in the process of setting of the rules and guidance for the ISO. A fairly simple organization with a lot of independence of judgement.

How independent should this governing board that oversees the ISO be? We can talk about having a representative sample of the industry on the board. You can actually have anyone on the Board because the purpose of the Board of Directors would be to make sure that this organization performs its function within the bounds that are set.

Second Speaker:

In New York, there are three situations in which Niagara Mohawk is discussing ISOs and market restructuring issues. One of them started with an October of '95 NiMo filing of a plan for providing customer choice starting in January, '97. That filing proposed the creation of a single company spot market in our service territory if, in fact, the rest of the state did not move forward with a spot market. The second is a forum where we've been discussing with other utilities in the state how to formulate or restructure a pool to improve the pricing and provide open access to all market participants. Finally, marketers, independent power producers, and the New York State Public Service Commission have instituted a proceeding to look at restructuring the markets in New York State.

NiMo has a recommended a wholesale POOLCO which will ultimately develop into a retail model. In our model, we have a spot market administered by the power exchange and the independent system operator. There are transmission suppliers and the transmission system is leased to the independent system operator. Power suppliers then would sell into the spot market if they wanted to, or they could engage in bilateral contracting. The bilateral market will act as a check of the spot market-if the spot market is not working efficiently, everyone would do more to bilateral transactions. The power suppliers would sell both reliability service into the pool and, of course, they would offer power supplies. The customers, in our mind, are energy service companies that would sell those to power the ultimate customer. Parties to the bilateral contracts would buy transmission services from the pool exactly the same way as pool-supplied power buyers. Transmission and reliability services would have to be acquired through the pool. In a sense, the bilateral would sell the reliability services and then buy them back for the same price. The object is to avoid a lot of bureaucracy.

The function of the ISO is straightforward. It should maintain system reliability, dispatch and schedule all power supplies. NiMo believes that congestion pricing for transmission determines the requirements for liability. Now these are really are the same thing as NERC rules and MPCC rules. The important thing is the interpretation of those rules by ISO. That is, the ISO determines how much reserve power is needed on a particularly day.

We have the ISO executing the activities under the direction of a power exchange. Our power exchange really develops the rules for how the market works, but the ISO implements it. Our view is that you can not possibly separate operations from pricing. So, the ISO would take bids for class of the energy and ancillary services. These are all short-term, with maybe two-day-ahead commitments. The ISO would not be allowed to enter into long-term contracts, with the exception of contracting for black start capability. The ISO would complete an even commitment process, do the settlement process, sell transmission rights, and perform the transmission planning function (the ISO would do the technical analysis but would not make any investment decision). The market will do the investing. If you're on the downside of a constraint and you're a customer, and you can't get access to cheap power, you'd be willing to invest in a transmission line. If you are a generator and you're constrained in the market you can sell

into, we're sure you'd be also willing to invest in transmission. The market should be left to address investment decisions. The power exchange develops the market mechanism, directs bilateral contracting to the ISO, provides a forum for dispute resolution, and provides a forum for regional transmission planning. Again, the technical studies are done by the ISO, but the forum for transmission planning is here.

Our governance system consists of a FERC-regulated, not-for-profit, Board of Directors made up of transmission-owning entities. The reasoning for that is that the responsibility of reliability still lies with the utilities. They are the ones that ultimately will get sued and at least in New York, it's their five billion dollars that have been invested in transmission facilities. We believe that there is a need to have some way of weighting votes on the Board of Directors, for a couple of reasons. One is that, down the road, I'm not sure the utilities will be the only ones building transmission lines. We need to leave room for other people to enter into the governance system, however in our model we didn't have to worry about this because we are the only utility.

The power exchange governing board will be a not-for-profit self-regulated body under FERC RTG rules. The dispute resolution committee or function will resolve most problems, thus reducing the number of appeals that reach FERC. Participation would be open to all market players who fall into three voting classes: transmitters, transmission-dependent entities, and generators. In some types of votes, agreement of all three voting classes will be needed to make a change to power exchange policy. Within the classes, votes will be weighted by megawatt miles, total annual energy produced, and energy transmitted through the ISO. Within the voting classes an affirmative vote of two-thirds is required to make decisions. The power exchange will have auditing rights to make sure that the ISO is implementing what has been asked for.

You said the ISO would perform the transmission planning function by handling the technical mechanics. Does this mean that the underlying control areas and owning entities would no longer perform that function at all?

I don't know that it's possible for them to do it. I think it requires a joint effort, in one sense. As you know, this requires a lot of data. Also, whether we like it or not; the transmission system interacts with the sub-transmission and distribution.

I was a little surprised that you had the power exchange conduct transmission planning. Can you talk a little more about that?

_: The reason we did this is that we wanted a forum for regional transmission planing. Since the power exchange has a very open governance process, we thought it would also be a good forum for people to discuss transmission, if there was a need to. There is, of course, another perspective on this question which says that the market will take care of transmission planning, and maybe there isn't even a need for that function.

_: Does your proposal assume that generation is separate from transmission?

_: In NiMo's case the proposal was to separate the company into a generation company and a transmission distribution

company. However, this isn't necessary or mandatory.

_: Where would the New York Power Authority end up in your governance model?

_: They would be a transmission company. Actually, we were hoping that they would be a party leasing their facilities to the ISO just like other players.

Third Speaker:

The one thing that regulators realize is that the PJM system has brought certain efficiencies to the system of the five states that are served by it. The New Jersey Board believes that the proposal for restructuring PJM is a small step toward the promotion of competition in the wholesale marketplace. The issues that regulators in most states have been trying to address are whether or not we are all in the same boat with regards to stranded investment, and whether there should be functional unbundling and market power.

The PJM proposal for the ISO's governance includes a seven-member Board of Directors, three of which would be representatives of the utility companies. These explicit utility board member's seats will dissolve after they've been in office for three years. In other words, there will be no allotted slot for utility companies on that Board of Directors in the long term. The concerns the New Jersey Board has with the ISO proposal revolve around congestion pricing issues. There is a concern that the zonal pricing mechanisms are too complicated. This was a major point of contention of PECO's, they felt it would be simpler to have a postage stamp rate throughout the PJM system. Our other area of concern is related to market power in the spot market. All of the commissions that I'm aware of at this point are conducting proceedings on this issue.

In addition, I have specific concerns with congestion on the system. How would the expansion or improvement of the transmission congestion bottlenecks actually be done through an ISO? The ISOs will have to deal with the states as well as with FERC. Yet, the states have the primary siting authority. This begs the question, what powers need to be inherent in an ISO? Should they have negotiating power or the ability to make planning decisions? If not, is this supposed to be done simply by individual utility companies in their own franchise market areas? This seems to be an area about which a lot of people this morning were assuming a lot of things, and I really wasn't quite sure what the answers were or how they saw the ISO interfacing with state governments. As a lot of you know, siting is not an easy issue. If there is, as there is in the Northeast, a tremendous amount of excess capacity, then the upgrading, improvement and expansion of the transmission system is a challenge. The question I would like to pose to you is how would a siting issue really be handled?

General Discussion:

One of the tensions that I've noticed is related to the question of how independent the ISO should be from the various market participants. On the one hand, you have existing utilities who either have a formal legal obligation to serve or take the view that when a problem develops, they're the ones who are going to be called on the carpet. With this perspective, it is understandable that they are reluctant to turn over control of the decision-making process to some unknown entity.

Thus, NiMo has proposed a power exchange which is governed by everybody and an independent system operator which is governed by the transmission owning utilities. It is not surprising that the ISO has been given all the power in this system. The PJM proposal has a very independent Board of Directors, but it carefully constrains what the independent system operator can do.

We have to remember that the real issue is the market power problem, and that's why we're considering independent system operators. The ISO was thought to be necessary because open access and functional unbundling for commissioners were not to thought be adequate remedies. Naturally there will be tension between the utilities that feel that they're still accountable and those people that feel that there needs to be some independence. Obviously, the best solution is divestiture. If you had to divest you would not need to be worried about sub-optimal second or third best solutions. We are struggling to come up with sort of a remedy that will be hopefully as good or close to as good as divestiture as we can get.

Whether an ISO has the authority to try to police rules or just establish rules of equity and fairness, the ownership and operation piece can not be totally separated. There are a lot of financial issues that have to be addressed. In this regard, the reluctance on behalf of some parties to vest a lot of authority, planning or otherwise, in an ISO is reasonable.

If utilities have an obligation or a liability, they ought to be given the ability to govern or to have significant governance of the ISO. Yet, the IPPs and some of the other players keep talking about market power. How are their concerns satisfied? Do you say, "look, we're just not going to be able to satisfy them now"? Do you say "let's wait four or five years, until this market evolves further, to figure this part out?"

That's an area where you want to wait. NiMo's proposal, in fact, makes the process very impartial and very open.

The fears of gaming of the system and abuse of market power go beyond the issue of ISO structural decisions. A lot of the issue is wrapped up in FERC's review of its merger and acquisition policies. The real test of fairness will come in how mergers are handled. Another test will be what states are going to do about either functional unbundling and divestiture. All those answers can not be deposited in the governance structure of an ISO unless you significantly curtail the powers of that ISO.

We seem to be making light of the time frame it will take to get inclusion of everyone in the formation of these ISOs. Most proposals to date have been state specific. Now, extend that to four or five or six states and the question you get is how much time it will take to form an ISO?

It is very likely that ISOs may start up as state institutions that have boundary agreements between the institutions. This is doable, especially if you have the same structure in each state, just as today we have coordination between reliability council and control areas. How can we, in fact, get an agreement of the state Commissions on this sort of thing? My impression is that it is a matter of building blocks: start at the local level, go to the regional level, and then try to get the ISO to be the coordinator of these

local organizations. We certainly are considering this.

Transmission Siting

In most states, only utilities have eminent domain . Furthermore, because the states have been largely brain-dead on the question of transmission pricing for 100 years, the only people that get a guarantee of a revenue requirement are the utilities. How does the non-utility transmitter or investor in the ISO come into existence? Aren't all the institutional arrangements weighted against them?

Who builds transmission in this new world? It seems to me that transmission has gotten built historically because of the obligation to serve. Not because building transmission is, by itself, seen as a highly profitable enterprise. If in the new, more competitive world there is not going to be an obligation to serve that drives transmission construction. Can we make transmission a profitable business?

Most people do not want non-utility transmission owners, and I think it's a matter of incentive. I have talked to a lot of folks who want to buy transmission now, and they want to do so under an obviously great lack of knowledge as to the return on that investment. They expect some sort of premium profits in market prices that, frankly, are nowhere in sight. There are financial as well as regulatory disincentives for non-utility transmission owners.

As a representative of a company who is in the business of developing independent transmission projects internationally, one of the main issues we face is how do we get paid. If you're in a network and you don't have the right to know who's using your facility and, therefore, how much you can charge them, it's a real problem. If you have a simple interconnector line, then there's a way to figure out who to charge. But in a network, we haven't figured out any easy way to charge individual customers, because you don't have a network customer who is going to be the default customer.

— : Who should have authority over siting issues? Will states find it difficult to agree on a process for cross-border facilities?

This is not a new problem. Lines have crossed state boundaries for a long time, and the authority issues have worked out in the past, and the same thing will happen under the new system.

Planning begins at the local level and bubbles up into a coordinated plan. There is no doubt that it would be convenient to have multi-state agreements to do siting, but I'm not counting on it.

The continuation of the states' role in siting is absolutely essential. The ISO operations will remain a monopoly function. Therefore, the ISO should not be empowered with the authority to condemn land. Additionally, the states' power to actually force a taking on behalf of the public is important because the public needs to be able to put that monopoly service in place. But, if there isn't congestion pricing and if a state's approval of expansions is narrowly based on the question "can you prove that it's our citizens that will benefit?" That situation may require statutory change to render "state interests" synonymous with the interests of regional markets.

Leaving the siting decisions to the individual utilities or states may not result in the most efficient outcomes. If regional planning and siting is allowed, these tests that states have may become simpler because there will be a group which will be able to explain to states the efficacies of siting on a region-wide basis. It's a question of how much time you want to spend, how many players do you want to go through, what do you think your transaction costs are going to be in trying to get to where you want to get.

Traditionally, transmission has been constructed as a part of generation construction and the states approved it based on project benefits. Planning, like politics, is always local. And I have every expectation that in the future, state commissions will be open to the same justifications that they had in the past. From that perspective we may be too far off from what will continue to happen.

What does the panel think of a establishing a large regional transmission company, either regulated by a regional entity or by FERC and DOE and/or FERC, which will determining the need for additional transmission capacity?

ISO Independence and Compensation

This question has to do with the independence of the ISO and its compensation. I want to draw attention to an internal inconsistency which I've heard a couple of times today. Everyone said this morning that the ISO has to be extremely independent. There was unanimous agreement on that. Then most everybody said, that in order for the ISO to function either as a not-for-profit or a for-profit private entity, it has to be compensated according to the success of the system. So, consider that -- first, it's independent. Second, it will be compensated according to the success, some success measures that we set up for the system. Are the success measures the profitability of the users? If so, do you compensate the ISO because the generators made a lot of money? Does the price cap formula compensate the ISO when transmission is cheap? Or when ultimate prices to consumers are cheap, or when the system is reliable or when the participants make money. I don't know the answer to these question. I simply mean to question the assumption that you can have a truly independent ISO that's also a for-profit entity or a highly-capitalized entity and that it's going to be easy to design the compensation mechanism. Those two things don't go together.

I wouldn't make compensation a for-profit thing. I'm drawn to the PJM model of creating an ISO that is a nondiscriminatory transparent implementor of rules. In my opinion, even creating a transco which owns all transmission assets independent of generators doesn't solve the problem. Take the English experience as an example. A gridco was created, but it didn't have the right incentives to create the most efficient transmission system. How do you compensate ISOs to create lowest-cost dispatch for the region? Since I don't think that's an easy way to go at it, I'm drawn to a transparent planning process. If there are obvious things that would create a lower overall cost for the region, and those who have responsibility for transmission are not in fact doing that, it will become transparent.

I have to admit that I have a real problem with an ISO being a profit-making organization, and part of it has to do with the

level of risk that the organization needs to take and the position that the organization will be required to take. For example, if the ISO begins to buy and sell auxiliary services based on profit motivations, then they ISO becomes a market participant. Of course that's not what we want.

Regional Governance Models

Can we create regional solutions? There are two problems that seem to me to be clearly regional in nature. Those would be the market power and environmental problems. Transmission construction might be considered a third regional problem that we have to think very hard about when we structure an ISO. What does a regional solution look like? And can we create a governance structure that harmonizes the needs of the states to have a real say and the needs of the region to have an effective mechanism to make a decision without shipping all decisions down to FERC? My answer is that we should create a regional governance mechanism, and it has to be somewhat different from what we have today.

Although FERC has shied away from using its joint board authority, perhaps we should suggest that, in a defined region, there should be a joint board to hear and resolve the kinds of disputes we've all been anticipating today. It seems to me that this is a pretty logical suggestion given current law.

This gets to the question: can you really harmonize the interests of the states? It may be more difficult than trying to start a joint board with FERC. In the PJM region, we are all working on different time frames right now, and we have different levels of understanding about what the benefits of a marketplace are going to be like. However, if the goal is to have a regional marketplace, ultimately you've got to work these problems out. There's got to be a certain amount of abdication of states' rights in order to make a marketplace work.

There certainly is a great concern among the states that there is this driving, compelling need to have a one-size-fits-all regional solution to the very tough issues that the states are grappling with. It's time for us to take into account our individual differences. I do think that there needs to be sensitivity to regional solutions in this matter.

We will run into problems if you say to the federal government, you define the need for an interstate system, then just tell states that they have to just implement that. My suggestion would be to try to find some combined approach, where state and federal jurisdictions merge.

There has been a regional cooperation or government structure in the Northwest. It's been around for about ten years. It hasn't been involved in operation and the investment issues, but I guess I was curious if this has been a good case study? Did the Northwest Power Planning Council actually achieve its purposes?

I wouldn't hold it up as a great model. The Council has had a number of difficulties, most of which are inherent to interstate compacts. The Council's purpose was to decide when generation should be built, but it was created just prior to a period in which no new generation was needed. This fact, however, had no effect whatsoever on the Council's staffing levels. The Council itself consists of people appointed by the governors of Idaho, Montana, Oregon, and Washington. Their familiarity with the electric utility

industry ranges from very knowledgeable to haven't-got-a-clue. The Northwest Power Planning Council is in no way an organization that is set up to make hard operating decisions (nor does it purport to be). Rather it is a reconciler of different interests. Although it has done a decent job of this, the process tends to be slow and lends itself to uncomfortable compromises. I wouldn't advise that kind of an entity to run an ISO as it has very high decision-making costs, and lowest common denominator results.

I've heard a couple proposals today that have actually suggested that the NERC reliability councils could be separate from this function that schedules, allocates capacity, curtails in emergency situations, and I guess my question is, do people actually believe that you can have an effective operating system where there's one group of people that are dealing with the real-time spinning reserve and line-loading issues, and another group of people trying to allocate capacity and deal with the scheduling issues?

I happen to think that these functions can be separated. This format is just an extrapolation of today's system, where you have reliability councils with broad participation, and they have done the job. I see the ISO just as a control area at a higher level. Frankly, I am concerned about blending together two functions that don't need to be put together, and that in fact might be very difficult to put together.

_: There was a comment earlier about a FERC joint board authority. Reliability councils were formed a long time ago. They were formed for basis of politics, they were formed for ego, they were formed for good reliability reason. But they are not, at least in our part of the world, regional markets. Maine, for example, has 45,000 megawatts of generation capacity, that's a pretty small region. Southern Electric Reliability Council (SERC) is a huge region. How do we get past the mindset that the current regions are the appropriate ISO regions?

One way is to challenge everyone with an idea. Unfortunately, this sparks immediate opposition and leads to endless arguing. The other method is to keep moving forward and let someone else clean up what is left behind, and see what happens. It's not that easy. The Midwest will probably proceed based on the assumption that the two regions will not merge. My expectation, however, is that eventually they will merge. It doesn't take much of a stretch of the imagination to think of an operator operating two regions. However, I wouldn't make that a requirement, as it would open a whole set of arguments that are irrelevant to the formation of the ISO.