

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Remedying Undue Discrimination  
through Open Access Transmission Service  
and Standard Electricity Market Design

Docket No. RM01-12-000

NOTICE OF WHITE PAPER

(April 28, 2003)

Today the Commission is publishing a White Paper to set forth its assessment of how the electric utility industry should move forward to achieve long-term benefits for electricity customers, and how it intends to change the rule proposed in the above docket on July 31, 2002, to meet the concerns that have been raised in rulemaking comments.

The White Paper is being placed in the record of this rulemaking docket. It will also be available on the Commission's website at [http://www.ferc.gov/Electric/RTO/mrkt-strct-comments/discussion\\_paper.htm](http://www.ferc.gov/Electric/RTO/mrkt-strct-comments/discussion_paper.htm).

The Commission welcomes public comment on this document. All comments will be available for review at the Commission or may be viewed on the Commission's web site at <http://www.ferc.gov>, using the "FERRIS" link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support at [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov) or toll-free at (866) 208-3676, or for TTY, contact (202) 502-8659. Comments may be filed electronically via the Internet in lieu of paper; see 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's web site under the "e-Filing" link. The Commission strongly encourages electronic filings.

The Commission also intends to begin holding regional technical conferences in the near future, to discuss with states and market participants in each region reasonable timetables for addressing wholesale market design issues discussed in the White Paper and ways to tailor the Commission's final rule to benefit customers within the region. We will issue notices of the conferences shortly.

By direction of the Commission

Magalie R. Salas  
Secretary

**FEDERAL ENERGY REGULATORY COMMISSION**

**White Paper  
Wholesale Power Market Platform**

(Issued April 28, 2003)

The Federal Energy Regulatory Commission's core mission under the Federal Power Act is to achieve wholesale electricity markets that produce just and reasonable prices and work for customers. The Commission's July 2002 proposal to harmonize wholesale power markets sought to advance this core mission in the context of the new realities of regional electricity markets.<sup>1</sup>

The industry has been evolving toward a market-based approach for well over a decade and active long-term wholesale bilateral markets exist in all regions of the country. However, short-term wholesale markets with transparent prices and market structures that will reliably produce just and reasonable prices are not likely to develop without strong Commission action. Wholesale electricity markets do not automatically structure themselves with fair behavioral rules, provide a level playing field for market participants, effectively monitor themselves, check the influence of market power, mitigate prices that are unlawful, or fix themselves when broken. These are the responsibilities of the Commission under current law, and our proposal was made with these responsibilities in mind.

Our proposal was informed by the experiences of this country and other countries in electric market design, including the effects of supply shortages, demand that does not respond to high prices, lack of price transparency in the marketplace, and the importance of market monitoring and market power mitigation. Based on the extensive comments we have received during the past nine months, we are issuing this White Paper to set forth our assessment of how best to move forward in the electric industry for the long-term benefit of electricity customers, and how we intend to change our proposed rule to meet the concerns that have been raised.

Our goals continue to be reliable, reasonably priced electric service for all customers; sufficient electric infrastructure; transparent markets with fair rules for all market participants; stability and regulatory certainty for customers, the electric power

---

<sup>1</sup>Notice of Proposed Rulemaking, Docket No. RM01-12-000, issued July 31, 2002.

industry, and investors; technological innovation; and efficient use of the nation's resources. Further, providing regulatory certainty for the industry and investors in order to build needed infrastructure is a critical need facing the energy industry and requires Commission action.

Under the Final Rule, we intend to focus on the formation of regional transmission organizations (RTOs) and on ensuring that all RTOs and independent system operators (ISOs) have good wholesale market rules in place.<sup>2</sup> We will eliminate the proposed requirement that public utilities create or join an Independent Transmission Provider. Instead, in light of the fact that almost all public utilities already have joined, or committed to join, an RTO or ISO, the Final Rule will require public utilities to join an RTO or ISO.<sup>3</sup> Further, we intend to adopt a Final Rule that allows for phased-in implementation and sequencing tailored to each region and that allows modifications to benefit customers within each region. In addition, if for a specific RTO or ISO it can be demonstrated to the Commission that the costs of implementing any feature of the market platform outweigh its benefits, the Commission will not require implementation of the feature for that particular RTO or ISO.<sup>4</sup>

For the basic wholesale market platform, we intend to build upon the existing rules adopted in Order No. 2000 for RTOs by adding features that we have learned are necessary for effective wholesale power markets.<sup>5</sup> For example, Order No. 2000 did not include market power mitigation measures and does not prevent flawed market designs. Wholesale electric markets will not be able to deliver full customer benefits in the future without the oversight and transparency that regional independent transmission organizations can provide. Healthy and well-functioning wholesale power markets are central to the national economy, and we believe that regional, independent operation of the transmission system, with proven market rules in place, is the critical platform for the

---

<sup>2</sup> For the purposes of the Final Rule, all of the characteristics and functions for RTOs would apply to Independent System Operators (ISOs), except for scope and regional configuration.

<sup>3</sup>The requirements of the Final Rule will not apply to Commission-jurisdictional electric power cooperatives that serve only retail load.

<sup>4</sup>We intend to commence technical conferences in each region and to work with states and market participants to develop reasonable timetables for moving forward.

<sup>5</sup>Details of the wholesale power market platform and a comparison of them to the requirements of Order No. 2000 are included in Appendix A.

future success of electric markets. Divestiture is not required to achieve independent operation of the transmission system. Companies may remain vertically integrated under an RTO or ISO.

In the years since Congress enacted the Energy Policy Act of 1992, competition among power plants for wholesale customers' business has largely replaced traditional cost-of-service regulation of wholesale power sales. The Department of Energy found that relying more on markets has saved customers \$13 billion per year over traditional regulation. It has stimulated innovation in generation and transmission technologies. It has freed customers from being forced to pay for the "stranded costs" of unwise investments. This competitive market framework came about as a result of national legislation and a series of Commission initiatives in both the wholesale gas and electric industries. In particular, these actions were intended to provide all wholesale power sellers with equal access to the transmission grid. Equal, nondiscriminatory access is a necessary prerequisite for fair competition among sellers, and, together with regional operation of the grid, gives wholesale buyers access to a much wider range of supply choices.

The transition to restructured markets has not been smooth or uniform. In regions with an effective wholesale market platform, an ISO or RTO provides effective market monitoring and has clear market rules designed to protect customers. Some markets, however, clearly have not been immune from market design flaws. Experiences in California have shown the consequences of poorly designed markets and inadequate generation, transmission and demand response. Moreover, they demonstrate the need for before-the-fact market power mitigation and ongoing market monitoring. Some areas also have experienced "seams" problems where differences in design between regions create artificial barriers to trade which raise costs, limit customer supply choices, and create opportunities for exploitation of differences between markets.

In other areas of the country, where markets do not have independent or regional grid operation, the lack of price transparency in the marketplace can mask problems and transmission operators can use their ability to control the transmission system to favor their own power sales. New competitors may be blocked or delayed because the transmission operator can favor its affiliated suppliers both in interconnecting to the grid and in allocating the costs of interconnection. The result of these problems is higher customer costs, making independence a critical element for protecting native load. Dealing with these issues and concerns on a case-by-case basis takes significant time and effort for both the Commission and market participants to resolve.

In the proposed rule, the Commission identified the building blocks for a healthy wholesale market to address the problems we have experienced in both competitive and non-competitive markets. In moving forward on a Final Rule, we believe it is critical to retain certain fundamental building blocks for healthy electric markets, and we agree with commenters that regional economic differences and regional timing constraints must be recognized. Below we identify market issues that lend themselves to regional solutions without compromising the integrity of a solid market platform.

The Commission is aware that the success of our RTO-based initiative is more likely in a region where the bulk of the transmission grid is in the hands of jurisdictional public utilities. But in the Pacific Northwest, roughly 80 percent of the grid assets are controlled by the Bonneville Power Administration, which is not a public utility under the Federal Power Act. Bonneville's participation in RTO West is essential for RTO West to succeed. Thus, we encourage Bonneville's continued voluntary participation in RTO West. We are also aware that Bonneville will continue to participate only if RTO West has the flexibility to meet the unique needs of the Pacific Northwest. We clarify what may be obvious. Any decision of Bonneville to meet its obligations and operational responsibilities with respect to such matters as irrigation, flood control, treaties, environmental rules and the like is solely Bonneville's to make and is not jurisdictional to the Commission. While the Commission has limited jurisdiction over Bonneville's rates under the Pacific Northwest Electric Power Planning and Conservation Act, the contracts between Bonneville and its customers do not require Commission review or approval. We have heard the concerns expressed about the merits of locational pricing and a day ahead market in a region dominated by interdependent hydroelectric resources. With respect to these concerns, our commitment is to work with interested parties, including state commissions, to find solutions that are appropriate to the unique needs of the Pacific Northwest.

The Commission will consider all comments received on this White Paper, as well as any pending electricity legislation being considered in the U.S. Congress, prior to issuing a Final Rule.

### **Comments on the Proposed Rule**

A number of concerns have been raised about various aspects of the proposed rule. We have received approximately 1,000 sets of formal comments on our proposed rule. The most extensive concerns involved the following issues. We state these concerns and our responses below:

- The Commission proposed to assert jurisdiction over transmission used to provide retail service to native load customers.

Pursuant to Order No. 888, the Commission currently asserts jurisdiction over wholesale transmission service and unbundled retail transmission service by public utilities. In the Final Rule, with respect to bundled retail service, we will continue our existing practice for RTOs and ISOs of distinguishing between the non-price terms and conditions of transmission service and the rates for transmission service. As discussed in Appendix A, the non-price terms and conditions of the RTO or ISO tariff will apply equally to all users, including those taking service to meet their obligation to serve bundled retail customers. However, the Commission will not assert jurisdiction over the transmission rate component of bundled retail service, thereby avoiding unintended issues raised by a new assertion of jurisdiction.

- Specific features of the proposed rule, particularly the resource adequacy requirement and the regional transmission planning requirement, infringe on state jurisdiction.

The Commission clarifies that nothing in the Final Rule will change state authority over these matters. We will not include a minimum level of resource adequacy. The RTO or ISO may implement a resource adequacy program only where a state (or states) asks it to do so, or where a state does not act. The Final Rule will direct RTOs and ISOs to develop a periodic regional transmission plan for submission to relevant state and local siting authorities and to assist the states in whatever manner they desire, including evaluating the impact of new generation, transmission, energy efficiency, and demand response on regional reliability and resource adequacy.

- The transition process to the new proposed transmission service would not provide sufficient protection for existing customers.

As with our earlier restructuring efforts in the natural gas and electric power industries, we want to ensure that existing customers retain their existing transmission rights and retain rights for future load growth. While all customers that pay a basic access charge can schedule transmission service, it is important that customers be able to protect themselves from congestion costs through Firm Transmission Rights (FTRs). The Final Rule will eliminate any requirement that FTRs be auctioned. We will, instead, look to regional state committees to determine how such rights should be allocated to current customers based on current uses of the grid. Varying approaches to FTR allocation need not create "seams" with neighboring regions.

- The proposed rule was too prescriptive in substance and in implementation timetable, and did not sufficiently accommodate regional differences.

As discussed above, we intend to adopt a Final Rule that allows for phased-in implementation and sequencing tailored to each region and that allows modifications to benefit customers within each region. To the extent that it can be demonstrated to the Commission that the costs of implementing any feature of the Final Rule outweigh its benefits, the Commission will not require the RTO or ISO to implement that feature. Before issuing a Final Rule, we intend to convene technical conferences with state commissioners and market participants in each region to discuss which aspects of the platform (if any) have not already been addressed and the timeline, sequence and budget for moving forward.<sup>6</sup> Also, as discussed in Appendix A, each RTO or ISO would provide a forum for state representatives to participate in the RTO's or ISO's decisionmaking process. That forum is referred to as the regional state committee.

- The proposed rule did not provide sufficient clarity on cost recovery for investment in new transmission facilities.

Each RTO or ISO will be required to have a clear transmission cost recovery policy outlined in its tariff. We will look to the RTO or ISO and the regional state committee to determine the appropriate regional approach for allocating the costs of new transmission. Regions may differ on the extent to which they want to rely on participant funded expansions; this difference need not create "seams" with neighboring regions. Because this issue is such an important one in stimulating appropriate investment by both existing and new transmission companies, we will allow an RTO or ISO to implement such policies once there is a regional planning process through which an independent entity performs all necessary facilities studies and determines cost responsibility for the required transmission upgrades.<sup>7</sup>

---

<sup>6</sup>To avoid the reliability and operational problems that result when some parts of the grid do not participate in RTO or ISO functions, we strongly encourage regional decision-making on RTO or ISO implementation through regional state committees, stakeholder committees, and other authorities in the region.

<sup>7</sup>In Appendix A, we explain that allowing participant funding on the basis of having an independent entity perform transmission planning and related cost allocation is a transitional approach that could be used in anticipation of the RTO or ISO assuming operational control of the regional transmission grid within one year.

## **Wholesale Market Platform**

The Commission believes that certain elements need to be in place for well-functioning wholesale markets.

### **Regional Independent Grid Operation**

Order No. 2000 required that all RTOs meet four minimum characteristics: independence, scope and regional configuration, operational authority, and short-term reliability. The Final Rule will reaffirm the need for these characteristics. In particular, the lack of independence continues to plague electricity markets because it provides an incentive for those who own generation and operate transmission facilities to operate the transmission system in ways that exclude competing generation suppliers and can allow the exercise of market power. This conflict of interest cannot be remedied through oversight and enforcement. Rather, structural separation of transmission operation from other wholesale market activities is required to eliminate the ability for such manipulation.

Regional operation is critical for both reliability and efficiency because power flows freely throughout regional grids. Order No. 2000 said "the scope and configuration of the regions in which the RTOs are to operate will significantly affect how well they will be able to achieve the necessary regulatory, reliability, operational and competitive benefits." However, in the Final Rule we will allow flexibility on scope and configuration for ISOs. RTOs and ISOs are developing methods of interregional coordination that allow separate control, but a single market from the customer's perspective. Therefore, in the Final Rule we will not require ISOs to meet the scope and regional configuration requirement. However, all must actively pursue interregional coordination between RTOs and ISOs, including the elimination of the payment of multiple access fees for transactions that cross ISO and RTO borders.

Order No. 2000 required that the RTO be the sole provider of transmission service and sole administrator of its own open access tariff. Included in this is the requirement that the RTO have the sole authority for the evaluation and approval of all requests for transmission service including requests for new interconnections. The Final Rule will reaffirm these requirements.

### **Regional Transmission Planning Process**

Regional planning of the transmission grid is essential to ensure the most effective use of the interconnected grid facilities. The RTO or ISO is in a unique position to

discern regional needs and address factors inhibiting investment in transmission and generation through conducting a region-wide planning process. As required in Order No. 2000, the Final Rule will require the RTO or ISO to produce technical assessments of the regional grid and support the state siting authorities or multi-state entities by performing necessary studies. The purpose is to assist the states and market participants by giving an independent assessment of the transmission facilities needed by the region to reliably and economically serve load located within the region. How the RTO or ISO, state commissions, transmission owners, and other market participants participate in the process will be decided regionally. By administering the regional tariff, RTOs and ISOs also provide the critical link to a cost recovery mechanism for regional transmission expansions. The Final Rule would require RTOs and ISOs to have a regional planning process in place as soon as practicable.

### **Fair Cost Allocation for Existing and New Transmission**

The costs associated with the existing grid, other than those directly assigned, will continue to be recovered through rates paid by customers. To avoid having customers pay multiple, cumulative charges for transmission service across multiple utility grids in a region, the rate paid by a customer should permit that customer to have access to the entire region at a single rate. As discussed in Appendix A, regional state committees may agree on the form of access charge that will be filed by the RTO or ISO under section 205 of the Federal Power Act. That means the committee will decide whether to propose to move to a uniform rate for transmission service throughout the region (known as postage stamp rates), or whether to propose to maintain single, but different access charges depending on where power is taken off the grid (known as license plate rates).<sup>8</sup>

To gain access to a wider range of supply choices, RTOs and ISOs should eliminate the payment of multiple access fees across RTO and ISO borders. Rate mechanisms to minimize cost shifts should be used. If there is a notable imbalance between imports to and exports from an RTO or ISO, the net exporting RTO or ISO may seek to recover some of its transmission costs through an export rate.

As discussed above, costs of new transmission expansions will be recovered in accordance with the regional pricing policy, which may be informed by the appropriate regional state committee. As discussed in Appendix A, the regional pricing policy will be filed with the Commission by the RTO or ISO.

---

<sup>8</sup>Under license plate rates, the single access charge is usually based on each transmission owners' service area.

## **Market Monitoring and Market Power Mitigation**

These are relatively undeveloped features of Order No. 2000, which did not have a market power mitigation component. For customers to benefit from wholesale power markets, it is critical that market prices fairly reflect the conditions of supply and demand rather than the exercise of market power. Each RTO or ISO would have an independent market monitor either for the individual RTO or ISO or for a larger region.

The market power mitigation measures must protect against the exercise of market power without suppressing prices below the level necessary to attract needed investment in new infrastructure in the region. At a minimum, the RTO's or ISO's tariff should include rules limiting bidding flexibility where there is localized market power. The RTO's or ISO's tariff must also include clear market rules designed to prevent market manipulation strategies, including the types of anti-gaming tariff provisions in the proposed rule.

The types of mitigation tools and the triggers and consequences of mitigation should be tailored to the needs of each region. For example, energy-limited resources, such as hydroelectric generators, may need to have bidding mitigation protocols and thresholds that are different from thermal generators. However, mitigation tools which vary by region across market seams have the potential to create enforcement problems and undesirable behavioral incentives. For this reason, the Commission will look closely at mitigation proposals, not only for their suitability for the RTO's or ISO's regional markets, but for their compatibility with neighboring RTOs and ISOs.

## **Spot Markets to Meet Customers' Real-Time Energy Needs**

While we expect that the vast majority of energy bought and sold will continue to be under negotiated long-term contracts between customers and suppliers, the nature of electricity requires the availability of a spot market for the last-minute sales or purchases needed to ensure system reliability. This balancing function is currently performed by the transmission provider. Under the Final Rule, the RTO or ISO must use a real-time market for energy to resolve imbalances. A transparent spot market not only helps keep the system reliable and lowers costs but also provides important price and other information to all market participants on an equal and open basis. It also gives the public a timely way to assess the functioning of the market. These markets will also facilitate customer response to prices as well as ease the introduction of some renewable and other innovative supply technologies.<sup>9</sup> The RTO or ISO in each region will develop the

---

<sup>9</sup>State action is required for retail customers to have demand response options.

detailed market rules that will be included in its Commission-filed tariff. An RTO or ISO must also introduce a day-ahead market and a market for various ancillary services when the market is ready for those steps. Unlike Order No. 2000, which allowed power exchanges without a check for security constraints, any RTO or ISO day-ahead market must be designed to work reliably with the congestion management system.<sup>10</sup>

### **Transparency and Efficiency in Congestion Management**

Regions should develop an approach to manage congestion that protects against manipulation, uses the grid efficiently, and promotes use of the lowest cost generation. Efficient market behavior depends heavily on assigning cost responsibility to those who cause the costs and the benefits to those who reduce costs. Today, transmission providers resolve congestion through a system that causes unnecessarily expensive generation redispatch. These added costs are hidden but are real and are paid by customers today. Order No. 2000 required RTOs to have transparent market mechanisms with efficient price signals in place to manage transmission congestion within one year of initial operation. We would continue that general approach for both RTOs and ISOs. We clarify that this rule will not override decisions we have already made in individual RTO or ISO cases regarding congestion management.<sup>11</sup>

### **Firm Transmission Rights**

RTOs and ISOs that use locational pricing to manage congestion would be required to make Firm Transmission Rights (FTRs) available to customers.<sup>12</sup> FTRs protect customers

---

Where states permit end users to participate directly in wholesale markets, demand response programs could be administered through the RTO or ISO tariff. The Commission strongly advocates demand response to limit supplier market power, enhance reliability and resource adequacy, and limit price volatility.

<sup>10</sup>The failure to check for security constraints created perverse incentives for participants in California to create congestion.

<sup>11</sup>As discussed in Appendix A, we are also including options that will minimize cost shifts.

<sup>12</sup>The discussion applies to RTOs and ISOs that have embraced locational pricing. As noted in Appendix A, there are ongoing discussions in the Western Interconnection regarding

from the costs of congestion. Under the Wholesale Power Market Platform, customers in RTOs that use locational pricing along with network transmission service would have firm physical transmission service, and customers with FTRs would be protected from congestion costs.

We will not require auctions of these rights. FTRs allow customers to schedule service according to the paths specified in their rights, with no risk of congestion charges. There also would be no risk of curtailment, absent a force majeure event such as the loss of a transmission line. By providing protection from congestion costs, FTRs also allow market participants to enter into contracts with a locked-in price if desired. Thus, FTRs allow for maximum utilization of valuable scarce grid capacity and therefore lower costs to customers.

In the Final Rule, for RTOs or ISOs that have not already addressed this issue, these rights would be allocated according to existing contracts and existing service arrangements in order to hold customers harmless. To the extent transmission rights have already been approved by the Commission in RTO or ISO orders we would not override these decisions in the Final Rule.

### **Resource Adequacy Approaches**

Order No. 2000 did not include a regional view of resource adequacy. We have learned that if one state has inadequate resources, it can create severe problems for the larger region. It is difficult for the Commission to assure just and reasonable wholesale market prices if there are insufficient resources to meet demand. Each region with an RTO or ISO will determine how it will ensure that the region has sufficient resources to meet customers' needs. The approach to and level of resource adequacy will be decided by the states in the region drawing from a mix of generation, transmission, energy

---

common elements of market design. We will not prejudge the results of those ongoing discussions.

efficiency, and demand response. It is important to have a consistent approach throughout the region, which should be developed by the regional state committee. States may decide to ensure resource adequacy through state imposed requirements on utilities serving load within the region. Other states may choose to have RTOs or ISOs operate capacity markets. In any case, the choice on the approach is made by the states within the region.

#### Other Issues on Which Commenters Seek Clarification

- **RTO and ISO Governance** – We will include overarching principles of independent governance in the Final Rule, but will decide governance issues on a case-by-case basis. The Final Rule will not override governance already approved in earlier RTO orders.
- **RTO Decisions** – We confirm that the decisions made in prior RTO orders in which we noted an overlap with the Standard Market Design rulemaking will not be overturned in the Final Rule.
- **Liability** – A standard tariff provision limiting liability for transmission providers will be included in the Final Rule.
- **Cyber Security** – We will adopt the North American Electric Reliability Council (NERC) standards for cyber security.
- **Reciprocity** – We propose no change to the Order No. 888 reciprocity requirements and Order No. 2000 provisions affecting non-jurisdictional entities in the U.S., Canada, and Mexico. We believe non-jurisdictional entities will benefit from RTO formation and the development of standardized wholesale market rules. We encourage such non-jurisdictional entities to voluntarily participate in RTOs and ISOs as full and equal members.
- **Independent Transmission Company** – We propose no change in our prior decisions on the functions that should be performed by an RTO and those that may be performed by an independent transmission company that operates within the RTO's territory.<sup>13</sup>

---

<sup>13</sup>See TRANSLink Transmission Company, LLC, et al., 99 FERC ¶ 61,106 (2002).

- **Standards** – We are encouraged that NERC, the North American Energy Standards Board, and RTOs and ISOs have reached agreements on a process through which they will work together in the development of reliability and market standards. Market standards developed through this process could be included in RTO and ISO tariffs to facilitate compatible and seamless rules across the interconnected power grid.

## **Appendix A**

### **Comparison of the Proposed Wholesale Market Platform with the RTO Requirements of Order No. 2000**

**This appendix compares the current requirements for RTOs of Order No. 2000 with the requirements of the Wholesale Market Platform that would apply to both RTOs and ISOs. The Wholesale Market Platform is designed to build on these existing requirements. ISOs would have to satisfy all of the same requirements as RTOs except with respect to Scope and Regional Configuration.**

**This appendix identifies the changes and additions to the Characteristics and Functions specified in Order No. 2000 that would result from the Wholesale Market Platform. All other Characteristics and Functions requirements would remain the same. The Final Rule for the Wholesale Market Platform would also clarify when incremental pricing of new transmission facilities (participant funding) could be**

**used. Finally, the Final Rule would impose several new market-related requirements on RTOs and ISOs.**

**Order No. 2000 was a voluntary program. Since that time, almost every public utility has joined or has committed to join an RTO or ISO. Therefore, the Final Rule will require that all public utilities join an RTO or ISO.<sup>1</sup>**

**As discussed in the White Paper, if for a specific RTO or ISO it can be demonstrated to the Commission that the costs of implementing any feature of the market platform outweigh its benefits, the Commission will not require implementation of the feature for that particular RTO or ISO.**

**Throughout this appendix we discuss the role of the states in RTO and ISO decisions. The Wholesale Market Platform would require each RTO and ISO to provide a forum for state representatives in the decision-making process, i.e., a regional state committee. This requirement is discussed in more detail below.**

**Finally, as discussed in the White Paper, the Commission does not intend to overturn decisions that have already been made in individual RTO cases. Decisions made in prior RTO orders in which we noted an overlap with Standard Market Design will not be overturned in the Final Rule. The Commission also does not intend to change our prior decisions regarding the functions that should be performed by an RTO and those that may be performed by an Independent Transmission Company that operates within the RTO's territory.**

#### **Characteristics and Functions**

**The four Characteristics required of an RTO are: Independence; Scope and Regional Configuration; Operational Authority; and Short-term Reliability.**

---

<sup>1</sup>The requirements of the Final Rule will not apply to Commission-jurisdictional electric power cooperatives that serve only retail load.

**The eight required Functions are: Tariff Administration and Design; Congestion Management; Parallel Path Flows; Ancillary Services<sup>2</sup>; OASIS; Market Monitoring; Planning and Expansion; and Interregional Coordination.**

## **Characteristics**

### **1. Independence**

***Order No. 2000.* RTOs must be independent of market participants. As set out in Order No. 2000, by market participant, the Commission means any entity that, either directly or through an affiliate, sells or brokers electric energy, or provides transmission or ancillary services to the RTO unless the Commission finds that the entity does not have economic or commercial interests that would be affected by the RTO's actions or decisions.**

***Wholesale Market Platform.* RTOs and ISOs would be required to meet all of the Order No. 2000 principles for Independence. In addition, the Final Rule will add to the Order No. 2000 requirements overarching principles on how to structure independent governance. The Commission will decide RTO governance matters on a case-by-case basis. Further, these overarching principles will not change governance decisions that have been approved in earlier RTO orders.**

### **2. Scope and Regional Configuration**

***Order No. 2000.* The RTO must serve an appropriate region. The region must be of sufficient scope and configuration to permit the RTO to maintain reliability, effectively perform its required functions, and support efficient and non-discriminatory power markets.**

***Wholesale Market Platform.* RTOs would be required to satisfy this Characteristic. However, new and existing ISOs would not be required to satisfy this Characteristic. But, ISOs must actively pursue interregional coordination to minimize the creation of seams that act as barriers to trade among regions.**

---

<sup>2</sup>This includes operation of a real-time spot market for energy imbalances.

### **3. Operational Authority**

***Order No. 2000.*** The RTO must have operational authority for all transmission facilities under its control. The RTO must also be the security coordinator for the facilities that it controls.

***Wholesale Market Platform.*** RTOs and ISOs would be required to meet this Characteristic.

### **4. Short-Term Reliability**

***Order No. 2000.*** The RTO must have exclusive authority for maintaining the short-term reliability of the grid that it operates. It must have exclusive authority for receiving, confirming and implementing all interchange schedules. The RTO must have the right to order redispatch of any generator connected to transmission facilities it operates if necessary for the reliable operation of these facilities. When the RTO operates transmission facilities owned by other entities, it must have authority to approve or disapprove all requests for scheduled outages of transmission facilities to ensure that the outages can be accommodated within established reliability standards.

***Wholesale Market Platform.*** RTOs and ISOs would be required to satisfy this Characteristic.

## **Functions**

**Under Order No. 2000, the RTO must perform the following Functions when it commences operations, unless otherwise noted.**

### **1. Tariff Administration and Design**

***Order No. 2000.*** The RTO must administer its own transmission tariff and employ a transmission pricing system that will promote efficient use and expansion of transmission and generation facilities. The RTO must be the only provider of transmission service over the facilities under its control, and must be the sole administrator of its own Commission-approved open access transmission tariff. It must have the sole authority to receive, evaluate, and approve or deny all requests for transmission service. The RTO must have the authority to review and approve requests for new interconnections. Customers under the RTO tariff must not be

**charged multiple access fees for the recovery of capital costs for transmission service over facilities that the RTO controls.**

***Wholesale Market Platform.*** The Final Rule would retain these features and also would clarify the jurisdictional consequences that result when a public utility that owns, controls, or operates transmission facilities in interstate commerce joins an RTO or ISO. In the context of RTOs and ISOs, the RTO or ISO becomes the sole provider of transmission services for the facilities it controls, and transmission owning members of the RTO or ISO become wholesale customers of the RTO or ISO.

To accommodate both the realities of a regionally operated transmission system and the jurisdiction concerns raised by the states, the Commission will distinguish non-price terms and conditions of transmission service from rates for transmission service. As discussed below, we will assert jurisdiction over the non-price terms and conditions of transmission used by wholesale transmission customers to serve bundled retail customers,

but we will not assert jurisdiction over the transmission rate component of bundled retail sales of electric energy.<sup>3</sup> **Moreover, in setting the wholesale rate for transmission, the Commission will rely upon the transmission rate set by the states for bundled retail service.**

Non-price terms and conditions of transmission service include matters such as reserving capacity and scheduling service, and it is critical in the context of RTOs and ISOs that such non-price terms and conditions apply to all customers on a not unduly discriminatory basis, with appropriate protection of native load customers. Consistent with our existing policy for transmission service used to serve unbundled retail customers (i.e., those in retail choice states), the Final Rule would allow state regulatory authorities to request waivers of any non-price terms and conditions of the RTO or ISO tariff that are not compatible with bundled retail service needs. We note that Commission-filed open access tariffs have successfully accommodated service to unbundled retail customers since Order No. 888 went into effect in

---

<sup>3</sup>Bundled retail sales of electric energy are sales of electric energy to retail customers where generation, transmission, distribution, and other services necessary to supply electric energy to such customers are sold as a single delivered service by a single seller and retail supplier choice is not permitted by state authorities.

1996 and that ISO and RTO tariffs have successfully accommodated service to unbundled as well as bundled retail customers.

We clarify that Commission jurisdiction over non-price terms and conditions of transmission used by wholesale transmission customers to serve bundled retail customers does not affect state authority over retail choice decisions, transmission siting, or local issues associated with transmission or distribution (e.g., maintenance, tree trimming, downed lines, etc.).

**The price that a transmission owner pays to the RTO or ISO becomes its cost for the transmission used to deliver the energy sold at retail. Consistent with existing Commission policy, transmission owners would be free to seek a rate from the RTO or ISO for the transmission purchased to deliver energy to bundled retail customers that is equal to the transmission component of the bundled retail rates set by the state commission. Under this approach, the rate set for transmission in interstate commerce to be re-sold as part of bundled retail service would be the same rate set by the state for the transmission component of bundled retail sales. This arrangement would be accomplished under a wholesale contract between the RTO or ISO and the transmission owner. Service agreements reflecting such proposed rates would be filed with the Commission and must be consistent with the Federal Power Act (FPA).**

The Final Rule would also **clarify that the RTO or ISO may use license plate or postage stamp rates for designing the access charges for the region. Each regional state committee may determine which approach the RTO or ISO should file with the Commission under section 205 of the FPA. If the regional state committee is unable to reach a decision on the methodology that should be used, the RTO or ISO would file its own proposal pursuant to section 205 of the FPA.**

**RTOs and ISOs should eliminate export and import fees where there is not a notable imbalance between imports to and exports from a region.** Other rate measures could be used to prevent cost shifts among the regions.<sup>4</sup> This could include adjusting the revenue requirement for the importing region to include a portion of the revenue requirement

---

<sup>4</sup>For example, a portion of the transmission cost of service of the exporting region could be recovered through the access charge of the importing region. Such a measure would reduce the transmission costs that would be collected from customers in the exporting region.

of the exporting region. However, where there is a notable imbalance between imports to and exports from a region, the RTO or ISO may seek to recover some of its transmission costs through an export fee.

## **2. Congestion Management**

***Order No. 2000.* The RTO must ensure the development and operation of market mechanisms to manage transmission congestion. The market mechanisms must accommodate broad participation by all market participants, and must provide all transmission customers with efficient price signals that show the consequences of their transmission usage decisions. The RTO must either operate such markets itself or ensure that the task is performed by another entity that is not affiliated with any market participant. The RTO must satisfy the market mechanism requirement no later than one year after it commences initial operation. However, it must have in place at the time of initial operation an effective protocol for managing congestion.**

***Wholesale Market Platform.* The Final Rule would retain the requirements that the RTO or ISO have an effective protocol for managing congestion at the time of initial operation and a market mechanism for congestion management after one year of operation.**

**The Final Rule would modify the requirement for market mechanisms to manage congestion. The RTO or ISO would be required to operate such markets itself. However, two or more RTOs or ISOs may apply to the Commission to do coordinated congestion management over a multi-RTO or ISO area as long as this function is carried out by an independent entity approved by the Commission.**

**Additionally, the Final Rule would add general principles that a good market congestion management system must satisfy. The congestion management system must: 1) protect against market manipulation, such as experienced in the California markets; 2) promote the efficient use of the transmission grid; 3) promote the use of the lowest cost generation as intended under traditional economic generation dispatch; 4) assign cost responsibility to those that cause congestion costs and assign the benefits to those that reduce congestion costs; 5) reduce involuntary transmission service curtailments, e.g., Transmission Line Loading Relief; and 6) be compatible with congestion management systems used by other RTOs and ISOs in**

**the electrical interconnection, to avoid creating barriers to trade among RTOs and ISOs.<sup>5</sup>**

**The Commission has already tasked the Seams Steering Group-Western Interconnection (SSG-WI) with developing consistent and compatible market elements for the Western Interconnection by the fourth quarter of 2003. The congestion management system being developed by SSG-WI should satisfy these general principles.**

**The Commission's preferred approach to congestion management is through locational pricing. However, other methods may be proposed. The RTO or ISO would need to demonstrate to the Commission how the proposed congestion management system satisfies these general principles.**

---

<sup>5</sup>For purposes of this discussion, the electrical interconnections are the Eastern Interconnection and the Western Interconnection.

If an RTO or ISO uses locational pricing, it must ensure that each existing firm customer (including transmission owners with a service obligation for native load) has the opportunity to obtain FTRs<sup>6</sup> equivalent to that customer's existing firm rights.<sup>7</sup> We will ensure not only that existing customers retain their existing rights, but also that they have the ability to obtain rights for future load growth. Customers who paid for transmission for load growth can retain the FTRs for that capacity. The FTRs that are offered by the RTO or ISO

---

<sup>6</sup>In the proposed rule, we coined the term "Congestion Revenue Rights," or "CRRs," as a standard term to describe the tradable, financial rights that would take the place of the current "physical" rights to firm transmission service. We chose this term to accurately describe what the holder had a right to receive – congestion revenues associated with the held CRRs' specified receipt and delivery points and MW quantity. These rights mirror those of FTRs used in most power markets. Reaction to our replacing "FTR" with "CRR" was less than enthusiastic; many saw no need for a new term unless a CRR differs from an FTR. As there is no real difference, we will now use the term "FTR," or "Firm Transmission Right,".

<sup>7</sup>A similar transition requirement would apply to a congestion management system not based on locational pricing.

must, in the aggregate, be consistent with the physical limitations of the transmission system.<sup>8</sup> If transmission rights or their allocation have already been approved by the Commission in RTO or ISO orders, we would not override these decisions in the Final Rule.

There would be no requirement to auction these FTRs either initially or after a transition period. The RTO or ISO tariff must also offer customers the ability to obtain additional FTRs for load growth. Customers paying the access charge would have the right to receive the additional FTRs associated with transmission upgrades that are included in the regional transmission plan. Entities that pay for the construction of transmission upgrades through participant funding will receive the FTRs that result from the transmission upgrades. Once the initial allocation of FTRs is completed, the RTO or ISO must operate a secondary market for holders of FTRs to voluntarily sell their FTRs to others.

The market mechanism for congestion management must be in place within one year after initial operation, unless the Commission approves a different timetable. As noted previously, the Commission will be flexible both as to timing and implementation based on regional differences and needs.

### **3. Parallel Path Flow**

***Order No. 2000. The RTO must develop and implement procedures to address parallel path flow issues within its region and with other regions. It will***

---

<sup>8</sup>Existing rights to service will be preserved. If necessary to meet these requirements, the RTO or ISO will create counterflow FTRs to make the aggregate set of FTRs physically feasible. If this results in a revenue shortfall, it could be recovered through an uplift charge.

have three years to implement measures to address parallel path flows between regions.

***Wholesale Market Platform.*** RTOs and ISOs will be required to perform this Function.

#### 4. Ancillary Services

***Order No. 2000.*** The RTO must serve as a provider of last resort of all ancillary services (including energy imbalance service) required by Order No. 888 and subsequent orders. The services must be included in the RTO administered tariff so that transmission customers will have access to one-stop shopping for transmission service. All market participants must have the option of self-supplying or acquiring ancillary services from third parties. The RTO must have the authority to decide the minimum required amounts of each ancillary service and, if necessary, the locations at which these services must be provided. All ancillary service providers must be subject to direct or indirect operational control by the RTO. The RTO must promote the development of competitive markets for ancillary services whenever feasible. To provide energy imbalance service, the RTO must ensure that its transmission customers have access to a real-time balancing market. The RTO must either develop and operate this market itself or ensure that this task is performed by another entity that is not affiliated with any market participant.

***Wholesale Market Platform.*** The Final Rule would require RTOs and ISOs to perform this Function. In addition, the Final Rule would require the RTO or ISO itself to operate a security constrained real-time market for balancing.<sup>9</sup> The RTO or ISO would not be permitted to use a separate power exchange to perform this function. The RTO or ISO must also operate a day-ahead market for energy and a market for various ancillary services unless it is demonstrated that the costs exceed the benefits of such markets.

The spot market(s) operated by the RTO or ISO should facilitate price transparency (i.e., for these spot markets the RTO or ISO should be required to provide on a timely basis, information about the availability and market price of sales of electric energy at wholesale in interstate commerce and transmission of electric energy in interstate commerce to the

---

<sup>9</sup>The spot market(s) operated by the RTO or ISO are intended only to supplement long-term supply arrangements.

Commission, state commissions, buyers and sellers of wholesale electric energy, users of transmission services, and the public.)

Load-serving entities must also be able to schedule transmission for generation owned by or contracted for by that load-serving entity to meet a service obligation to customers or an existing wholesale obligation. Buyers, including intermittent resources, may procure power through these spot market(s) to meet their short-term energy needs. Sellers, including intermittent resources, may offer power for sale through the spot market(s).

The spot market(s) operated by the RTO or ISO must facilitate the ability of demand to respond to prices. The RTO or ISO must work with state authorities to facilitate any demand response programs operated under state retail tariffs. The RTO or ISO must also work with states that permit end users to directly access the wholesale market to facilitate state required demand response programs or to include appropriate demand response programs in the RTO's or ISO's tariff.

Where a locational pricing system is used for congestion management, the prices in these spot market(s) must be location specific for sellers (nodal). The RTO or ISO may use zonal or nodal prices for buyers. Under a zonal system, the prices paid by load would be

aggregated for the zone (e.g., a utility service territory).<sup>10</sup> A locational pricing system can use either cost-based bids or market-based bids to determine the locational prices.<sup>11</sup>

The RTO may charge for transmission losses within the region based on average or marginal losses.

### **5. OASIS and Total Transmission Capability (TTC) and Available Transmission Capability (ATC)**

***Order No. 2000. The RTO must be the single OASIS site administrator for all transmission facilities under its control and independently calculate TTC and ATC.***

---

<sup>10</sup>This approach is in operation in the New York Independent System Operator, Inc. Under that system, generators see location specific prices. Load sees an aggregate price for each zone. Each zone is based on the service territory of an individual transmission owner.

<sup>11</sup>When PJM Interconnection, L.L.C. first started using locational pricing it did so using cost-based bids. As a transitional measure, regions may wish to take a similar initial approach to start locational pricing.

***Wholesale Market Platform.*** RTOs and ISOs would be required to perform this Function.

## **6. Market Monitoring**

***Order No. 2000.*** The RTO must provide for objective monitoring of the markets it operates to identify design flaws, market power abuses, and opportunities for efficiency improvements, and must propose appropriate actions. Reports on these issues must be filed with the Commission and affected regulatory authorities. The Commission believes the information collected will be data that the RTO will collect or have access to in the normal course of business.

***Wholesale Market Platform.*** The Final Rule would retain these features but would change the name and scope of this Function to Market Monitoring and Market Power Mitigation. The Final Rule would both expand and further define the role of market monitoring in the RTO or ISO. It would also expand this function to require the RTO or ISO and its market monitor to file market power mitigation measures that are needed for the market(s) operated by the RTO or ISO. Finally, the Final Rule would require that the RTO or ISO tariff include clear and enforceable rules to define and police market manipulation and gaming strategies.

The Final Rule would require that each RTO or ISO have an independent market monitor either for the individual RTO or ISO or for a larger region. The RTO or ISO tariff must contain appropriate market power mitigation measures to address market power problems in the spot markets. These mitigation measures must work together with measures on resource adequacy to ensure that the measures do not suppress prices below the level necessary to attract needed investment in infrastructure in the region.

The RTO or ISO tariff must also include a clear set of rules governing market participant conduct with the consequences for violations clearly spelled out. At a minimum these would include rules on: (1) physical withholding of supplies; (2) economic withholding of supplies; (3) reporting on availability of units; (4) factual accuracy of information submitted to the RTO or ISO; (5) the obligation of market participants to provide information to the market monitor; (6) cooperation of market participants in investigations or audits conducted by the market monitor; and (7) the requirement that all bids that designate specific resources must be physically feasible.

**The Final Rule would identify the reporting process that would be used if the market monitor thinks the markets are not resulting in just and reasonable prices or providing appropriate incentives for investment in needed infrastructure. This would include notification of the Commission, the regional state committee, and other appropriate state regulatory authorities of the nature of the problem and recommended solutions.**

**The Final Rule would also specify the periodic reports that the market monitor must prepare. The market monitor will provide annual reports on the state of its markets to the Commission, the regional state committee, and other appropriate state regulatory authorities . These reports will incorporate market metrics to provide a basis for measuring the performance of these markets across RTOs and ISOs, and to compare the performance of the market in each RTO or ISO over time. Metrics will also be developed to provide standard performance information on a monthly basis.**

## **7. Planning and Expansion**

***Order No. 2000.* The RTO must be responsible for planning, and for directing or arranging, necessary transmission expansions, additions, and upgrades that will enable it to provide efficient, reliable and non-discriminatory transmission service and coordinate such efforts with the appropriate state authorities. As part of this function, an RTO must encourage market-motivated operating and investment actions for preventing and relieving congestion. The RTO's planning and expansion process must accommodate efforts by state regulatory commissions to create multi-state agreements to review and approve new transmission facilities. The RTO planning and expansion process must be coordinated with programs of existing Regional Transmission Groups where appropriate. If the RTO is unable to satisfy this requirement when it commences operation, it must file with the Commission a plan with specified milestones that will ensure that it meets this requirement no later than three years after initial operation.**

***Wholesale Market Platform.* The Final Rule would retain these features and also would modify this Function to provide that the RTO or ISO must satisfy this requirement as soon as practicable but no later than when it begins operation, rather than after three years of initial operation. The Final Rule would not change**

**the decisions in prior RTO orders regarding the role that an Independent Transmission Company (ITC) could have in the regional planning process.<sup>12</sup>**

**The regional transmission plan must include all transmission facility expansions in the region. Thus, the RTO or ISO can assess the combined effect on loop flows and reliability of all existing and planned facilities, including transmission facility expansions for which the costs are not necessarily to be borne by all customers. However, we clarify that transmission owners and others may propose to build transmission enhancements. The RTO or ISO will assess the impact of these proposals in the regional transmission plan. In addition, the RTO or ISO may assess the need for transmission enhancements in view of opportunities for energy efficiency, demand response, and new generation technologies, consistent with the policy direction of the regional state committee on these issues.**

**The RTO or ISO must also be responsible for transmission planning, and for directing or arranging, necessary transmission expansions, additions, and upgrades that will enable it to reliably and economically serve** the needs of all customers in the region, including historical and native load customers and their projected load growth. The RTO or ISO would include transmission upgrades in the regional plan that are necessary to maintain or improve reliability or to reduce congestion and improve access to lower cost supplies (economic enhancements).

Economic enhancements would be included in the regional transmission plan with the costs recovered through the license plate or postage stamp access charges, if it is prudent to do so from the perspective of native load in the region. For example, these projects could include transmission upgrades that: 1) would resolve significant and persistent congestion within the region; 2) due to their size and scope, are unlikely to be undertaken as participant funded transmission upgrades; or 3) show positive benefits to the region using a cost benefit analysis that compares the cost to load within the region and the benefits to load within the region.

---

<sup>12</sup>See TRANSLink Transmission Company, LLC, et al., 99 FERC ¶ 61,106 (2002).

We will permit regional flexibility in determining the types of economic enhancements that would be recovered through the access charges.<sup>13</sup> Some RTO or ISO regions may choose an expansive definition of the types of economic enhancements that benefit customers within the region. Other RTO or ISO regions may choose to rely more on participant funding.

The RTO or ISO tariff would have a clear plan that states the non-discriminatory criteria that would be used for determining the reliability and economic enhancements that are needed for customers within the region. Each regional state committee may determine the criteria for these economic enhancements. If the regional state committee reaches a decision on the criteria that would be used, the RTO or ISO would file these criteria in a filing pursuant to section 205 of the FPA. If the regional state committee is unable to reach a decision, the RTO or ISO would file its own proposal pursuant to section 205 of the FPA.

The Final Rule would not require that the RTO or ISO use a Request for Proposal (RFP) process for transmission upgrades.

## **8. Interregional Coordination**

---

<sup>13</sup>As discussed below, the choice made by the region will affect the cost recovery for transmission upgrades. If a transmission upgrade is determined to be needed to reliably and economically serve load in the region, the costs will be recovered through the license plate or postage stamp access charges used by the region.

***Order No. 2000.* The RTO must ensure the integration of reliability practices within an interconnection and market interface practices among regions.**

***Wholesale Market Platform.* RTOs and ISOs would perform this Function. In addition, the Final Rule would require that RTOs and ISOs within an electrical interconnection coordinate to resolve seams issues. Additionally, as discussed above, RTOs and ISOs should coordinate to eliminate export fees where there is no significant trade imbalance between the regions.**

### **Transmission Pricing**

**In addition to the above Characteristics and Functions of an RTO, Order No. 2000 also addressed transmission pricing reforms by RTOs.**

***Order No. 2000.* RTOs may file for a variety of innovative rate reforms, including performance-based, returns on equity, non-traditional methods of determining depreciation schedules for new transmission investments, and incremental pricing for new transmission investments (which has since become known as participant funding). Some of these pricing reforms will be available only through January 1, 2005.**

***Wholesale Market Platform.* The Final Rule would provide that both RTOs and ISOs would be eligible for the rate reforms identified in Order No. 2000.**

**The Final Rule would provide further clarification on when incremental pricing for new transmission facilities (participant funding) could be used.** The cost of transmission projects that are determined through the regional planning process to be necessary to reliably and economically serve load in the region will be recovered through the access charge that is assessed to load in the region. As stated above, regions would have flexibility in determining the types of economic enhancements that would be recovered through the access charge. Some RTO or ISO regions may choose an expansive definition of the types of economic enhancements that benefit customers within the region. Other RTO or ISO regions may choose to rely more on participant funding.

These rate provisions would be revised to permit an optional transitional process that could be used for participant funding. For a transitional period, not to exceed a year, participant funding may be used for transmission upgrades for generator interconnection as

soon as an independent entity has been approved by the Commission and the affected states. Using the regional criteria, the independent entity would make decisions on which transmission upgrades should be participant funded and which ones should not. These decisions would be made through a regional planning process conducted by an independent entity in which the independent entity is also responsible for conducting all necessary facility studies.<sup>14</sup> However, this transitional process is explicitly predicated on the assumption that this will be the first step towards the RTO or ISO satisfying the requirements of § 35.34 of the Commission's regulations.

### **Additional Requirements of the Wholesale Market Platform**

In addition to the above changes to the existing requirements for RTOs, the Wholesale Market Platform would require the following:

#### **1. Role of the States**

*Order No. 2000.* Order No. 2000 recognizes that states have an important role in RTO formation and governance, and regional interests forming an RTO are required to consult with the states about the appropriate role for states and about the organizational form of the RTO. Although there were calls for the Commission to establish some form of regional regulation in Order No. 2000, the Commission decided, given the diversity of regional state interests and state laws, as well as differences in the organizational forms that RTOs may adopt, to decline

---

<sup>14</sup>E.g., if ESBI were selected by the SeTrans Sponsors to be their proposed ISA and it received the necessary regulatory approvals, ESBI could serve this function for SeTrans RTO on an interim basis.

to reach generic conclusions about states' roles. The Commission invited states to participate collaboratively with the FERC in fostering RTO formation.

*Wholesale Market Platform.* The Final Rule would retain the requirement for an important role for states in RTO or ISO formation. In addition, each RTO or ISO would be required to provide a forum for the participation of state representatives in its decision making process. The structure and functions of these groups will be determined by the states within the region. Each regional state committee will also decide how it will reach decisions, e.g., unanimous support or simple majority. State commissions working with existing RTOs and ISOs have developed procedures that provide examples that could be used in other regions. In the Midwest, state commissions have proposed the establishment of a flexible regional organization, a "Midwest Multi-State Committee," that would provide coordinated action on matters that are subject to state jurisdiction as well as issues that relate to wholesale power markets and interstate transmission. In the mid-Atlantic region, state commissions have a memorandum of understanding with the RTO. Other procedures could also be used.

An RTO or ISO may propose to recover as part of its annual budget, the cost of reimbursing state officials' reasonable expenses incurred by serving on the regional state committee.

Each regional state committee would have the primary responsibility for determining the regional proposals for cost responsibility and the transition process listed below. The RTO or ISO will provide the regional state committee with technical assistance. If the regional state committee reaches a decision on the methodology that would be used, the RTO or ISO would file this methodology pursuant to section 205 of the FPA. If the regional state committee is unable to reach a decision, the RTO or ISO would file its own proposal pursuant to section 205 of the FPA.

- Whether, and to what extent, participant funding would be used within the region for transmission enhancements. This would include whether participant funding would be used on a transitional basis before the RTO or ISO assumes operational control of the transmission facilities.
- Whether license plate or postage stamp rates will be used for the access charge paid by load in the region.

- Where an RTO or ISO uses locational pricing, whether the region will allocate FTRs directly to customers or whether FTRs will be auctioned and the revenues from those auctions (Auction Revenue Rights or ARRs) allocated directly to customers.
- The transition process that will be used in the region to ensure that each existing firm customer receives FTRs or ARRs, based on the regional choice, equivalent to the customer's existing firm rights. This includes whether any revenue shortfalls would be recovered through an uplift charge that applies to all customers in the region or over a narrower class of customers, e.g., only to customers in certain zones within the region.

Each regional state committee would determine the extent to which states within the region need to coordinate or have a consistent approach for certain planning issues that can affect cost responsibility among transmission owners and other load serving entities within the region. The RTO or ISO will provide the regional state committee with technical assistance. These include:

- Whether transmission upgrades for remote resources will be included in the regional transmission planning process.
- The role of transmission owners in proposing transmission upgrades.
- The role of generation, transmission, energy efficiency, and demand response in resource adequacy.

Each regional state committee will also be responsible for determining the resource adequacy approach that will be used across the entire region.

## 2. Resource Adequacy

*Order No. 2000.* Order No. 2000 has no provision for generation or demand response resource adequacy.

*Wholesale Market Platform.* Having sufficient available resources (generation, transmission, energy efficiency, demand response) is central to ensuring that wholesale power prices are just and reasonable and that service is reliable. The Final Rule will not require a uniform approach to resource adequacy. Rather, each regional state committee will be asked to determine the approach for resource adequacy across the entire region. The region may choose to use resource adequacy measures that are enforced by state regulation of utilities,

enforced through the RTO or ISO tariff, e.g., a capacity market, or other measures. The Final Rule will not set a minimum reserve margin.

The resource adequacy measures adopted by the region must work together with the region's market power mitigation measures to ensure that there are appropriate incentives to invest in sufficient infrastructure to maintain reliable and reasonably priced service to customers in the region.

### **3. Liability**

The Final Rule would include standardized tariff provisions that limit the liability of RTOs and ISOs and transmission owners that belong to RTOs and ISOs. The tariff would provide that they would not be liable for any damages arising out of ordinary negligence. In instances of gross negligence, the RTO or ISO or the transmission owners that belong to RTOs or ISOs would only be liable for direct damages, and not for consequential or indirect damages. The same protections would also apply to generators when they are implementing the directives of the RTO or ISO. Courts will determine whether an action is negligent or grossly negligent.

### **4. Cyber Security**

The Commission will adopt the North American Electric Reliability Council (NERC) standards on cyber security.