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MEMORANDUM

FROM: K. Jaffe
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RE: Summary of Final RTO Rule

On December 20, 1999, The Commission issued its Final Rule on Regional Transmission Organizations ("RTOs"). The Commission has adopted a Final Rule that generally follows the approach of the Notice of Proposed Rulemaking ("NOPR"). The Commission's objective is for all transmission-owning entities, including non-public utility entities, to place their transmission facilities under the control of appropriate RTOs in a timely manner. Order No. 2000 requires that each public utility that owns, operates, or controls transmission facilities to make certain filings with respect to forming and participating in an RTO. The Commission also codifies the minimum characteristics and functions of an RTO.

The following discussion summarizes the significant conclusions in Order No. 2000. The regulatory text promulgated by the Final Rule is also included.

A. Benefits That RTOs Can Offer

The Commission believes that benefits from RTO's would be universal and include: increased efficiency through regional transmission pricing and the elimination of rate pancaking; improved congestion management; more accurate estimates of ATC; more effective management of parallel path flows; more efficient planning for transmission and generation investments; increased coordination among state regulatory agencies; reduced transaction costs; facilitation of the success of state retail access programs; facilitation of the development of environmentally preferred

generation in states with retail access programs; improved grid reliability; and fewer opportunities for discriminatory transmission practices.

The Commission's best estimate is that formation of RTOs would result in savings of approximately \$2.4 billion per year, representing 1.1 to 2.4 percent of the current total costs of the U.S. electric power industry.¹

B. The Commission's Approach to RTO Formation

1. Voluntary Approach

The Commission believes that a voluntary approach "with guidance and encouragement from the Commission," is most appropriate at this time. Nevertheless, The Commission emphasizes that the filing requirements set forth in section 35.34(c) of the new regulations (described below) are mandatory – public utilities must file either an RTO proposal or a report on the impediments to RTO participation. In addition, the Commission expects that all transmission owners will participate in good faith in the collaborative process that it has established. Moreover, the Commission recognizes that it might have to consider, in individual cases, issues that arise as to whether market power has been mitigated in the absence of RTO participation or as to whether a merger would be in the public interest without RTO participation.

2. Organizational Form of an RTO

The Commission "designed this Final Rule to be neutral as to organizational form," and does not believe that the requirements for forming an RTO favor any particular structure. The Commission is prepared to accept a transco, ISO, hybrid form, or other form as long as the RTO meets the minimum characteristics and functions and other requirements. As discussed below, however, certain aspects of the Final Rule appear, perhaps unintentionally, to limit these options.

3. Degree of Specificity in the Rule

The Commission states that it has sought in the Final Rule to present "a minimally intrusive, solution-oriented approach that provides guidance and specifies only the fundamental RTO characteristics and functions."

¹ In response to comments that the costs of RTOs might outweigh the benefits, the Commission notes the flexibility built into the rule regarding potential structures and states that it "do[es] not believe it will be necessary to expend the same level of resources that were expended, e.g., in California, to create an RTO satisfying our minimum characteristics and functions."

4. Legal Authority

The Commission finds that it possesses both general and specific authorities to advance voluntary RTO formation and that it also has the authority to order RTO participation on a case-by-case basis, if necessary, to remedy undue discrimination or anticompetitive effects.

C. Minimum Characteristics of an RTO

1. Independence (Characteristic 1)

In the NOPR, the Commission stated that all RTOs must be independent of market participants. To achieve independence, the Commission proposed that RTOs must satisfy three conditions. First, the RTO, its employees, and any non-stakeholder directors must not have any financial interests in any market participants. Second, the RTO must have a decision-making process that is independent of control by any market participant or class of participants, and third, the RTO must have exclusive and independent authority to file changes to its transmission tariff with the Commission under section 205 of the FPA.

a. The Basic Independence Principle

The Commission reaffirms that the principle of independence is the bedrock upon which the RTO must be built and that an RTO needs to be independent in both reality and perception. The Commission stresses the importance of a decision-making process that is independent of the control by any market participant or class of market participants.

b. Who Is a Market Participant

After a careful review of the comments, the Commission modified the definition of a market participant that was proposed in the NOPR. The Commission agreed with many commenters that the NOPR definition was too broad in defining a market participant to be "any entity that buys or sells electric energy in the RTO's region or in any neighboring region that might also be affected by the RTO's actions." Thus, the Commission narrowed the definition of a market participant in the Final Rule to include those who sell or broker electric energy (at retail or wholesale) but not those who buy electric energy. The Commission will consider on a case-by-case basis whether particular buyers of electric energy (or any other entity such as a distribution-only provider) could manipulate an RTO's decisions to the disadvantage of other RTO customers. The Commission also dropped the phrase "in the RTO's region or in any neighboring region that might also be affected by the RTO's actions."

The Commission makes one other change to the NOPR definition to expand its scope. Paragraph (a) expands the NOPR definition by including entities that provide transmission or ancillary services to an RTO. The Commission finds that it would

compromise an RTO's independence if one or more transmission owners could influence the RTO's decisions to the detriment of other market participants.

There appears to be a tension (possibly unintended) between the Commission's definition of market participant and its acceptance, elsewhere in the Final Rule, of RTOs structured as transcos. Market participants include entities that provide transmission services to the RTO; however, as discussed below, active ownership of RTOs by market participants is to be phased out after a five-year transition period. This could be read to bar, after five years, a RTO that is owned and managed by one or more of a region's transmission owners, which is the common definition of a transco.

c. RTO Economic Interests in Market Participants and Energy Markets

The Commission reaffirms that the RTO, its employees and any non-stakeholder directors must not have any financial interests in market participants. The Commission notes that certain obligations of an RTO, such as being the supplier of last resort for required ancillary services, mean that most RTOs will be operators of bilateral and spot markets in ancillary services as well as buyers in these same markets. In addition, they will be resellers of any ancillary services that they purchase. The Commission states its intention that RTOs perform functions that make the transmission infrastructure operate efficiently, "not that they take actions in ways that skew competitive outcomes in the market." Given the possibility that an RTO may not be indifferent to whether the prices are high or low, the Commission requires that all RTOs must propose an objective monitoring plan to assess whether the RTO's involvement in these markets favors its own economic interests over those of its customers or members.

d. Passive Ownership in the RTO

The Commission seeks to provide current transmission owners with flexibility in deciding how they will relinquish ownership or control of their transmission facilities to an RTO and reaffirms that passive ownership of a transmission entity by a generating entity may be acceptable. The Commission's policy on proposals for passive ownership of RTOs by market participants has three key elements:

- Passive ownership proposals will be reviewed on a case-by-case basis. The Commission will approve a proposal only if satisfied that the passive owners have relinquished control over operational, investment and other decisions to ensure that the RTO will treat all users of the grid on an equal basis in all matters.
- Any RTO with passive ownership interests approved by the Commission must undertake an obligation and propose processes for an independent compliance audit to ensure the independence of its decisionmaking process from the passive owners. The first independence audit will be required two years after initial approval of the RTO and every three years

thereafter. The independence compliance audit must be submitted to the Commission in a public document without any requirement for approval by the RTO board.

- The Commission will take appropriate action if it finds evidence of abuses.

e. Active Ownership Interests in the RTO

The Commission defines “active” ownership to refer to ownership of voting securities that give the owner the ability to influence or control an RTO’s operating and investment decisions. The Commission clarifies that it is referring only to corporate or shareholder ownership in the RTO itself and not to ownership of transmission facilities under the RTO’s operational control. The fact that facilities are owned by market participants is not a concern to the Commission “unless the owners retain legal rights and operational responsibilities that make it difficult for an RTO to provide nondiscriminatory transmission service.”

The Commission concludes that it is in the public interest to permit some ownership of RTOs by market participants for a transition period of five years. After the expiration of that period, the RTO may seek an extension. The Commission will allow any market participant to own up to five percent of an RTO’s outstanding voting securities without the need for case-by-case review. A higher percentage may be acceptable based on factors such as the voting interests held by other class members, the amount held by passive owners, the degree of dispersion of voting interests, and the rights retained by the owners as suppliers of facilities to the RTO.

In addition, the Commission adopts a benchmark ceiling of 15 percent ownership by a class of market participants. The Commission will evaluate similar factors in determining on a case-by-case basis whether the specific figure should be higher or lower for a particular RTO.

Any RTO that proposes active ownership must adopt a system of independent compliance auditing to ensure that the active voting interests held by an individual market participant or classes of market participants do not convey decision-making control.

f. RTO Governing Boards

In the Final Rule, the Commission declines to impose specific requirements on RTO governing boards other than the general requirement that they must satisfy the overall principle that their decision-making process be independent.

The Commission offers some general guidance. Where there is a governing board with classes of market participants, the Commission expects that no one class would be allowed to veto a decision reached by the rest of the board and that no two classes could force through a decision that is opposed by the rest of the board. Where

there is a non-stakeholder board, the Commission believes that it is important that this board not become isolated. Both formal and informal mechanisms must exist to ensure that stakeholders can convey their concerns to the non-stakeholder board. Where there are stakeholder committees that advise or share authority with a non-stakeholder board, it is important that there be balanced representation on the stakeholder committees so no one class dominates its recommendations or its decisions.

g. Role of State Agencies

The Commission does not impose any specific requirements on the role of state agencies in RTOs.

h. Section 205 Filing Rights

In the NOPR, the Commission proposed that the RTO must have exclusive and independent authority to file changes in its transmission tariff under section 205 of the Federal Power Act. Upon consideration of the comments received, the Commission modifies the proposal, in part, to make clear that transmission owners who do not also operate their transmission facilities retain certain section 205 rights.

The Commission reaffirms its determination that RTOs must have the independent and exclusive right to make section 205 filings that apply to the rates, terms and conditions of transmission services over the facilities operated by the RTO. However, the Commission also finds it is reasonable for the transmission owners to retain certain independent section 205 filing rights with respect to the level of the revenue requirement that the transmission owners receive from the RTO and that the RTO, in turn, will collect from the transmission customers through its rates. Accordingly, the Commission clarifies that a transmission owner must have independent authority to set the level of its portion of the revenue requirement to be collected by the RTO.

2. Scope and Regional Configuration (Characteristic 2)

The Commission adopts the NOPR proposal on this characteristic. All RTO proposals must identify a region of “appropriate scope and configuration.” The Commission does not prescribe initial boundaries for RTOs, but notes that an appropriate region is one sufficient to permit the RTO to effectively perform its required functions and to support efficient and nondiscriminatory power markets.

The factors the Commission believes should be used to develop appropriate regions are called regional configuration factors. These cover such considerations as how large a region should be and how boundaries should be evaluated. For example:

- Making accurate and reliable ATC determinations: An RTO of sufficient regional scope can make more accurate determinations of ATC across a larger portion of the grid using consistent assumptions and criteria.

- Resolving loop flow issues: An RTO of sufficient regional scope would internalize loop flow and address loop flow problems over a larger region.
- Managing transmission congestion: A single transmission operator over a large area can more effectively prevent and manage transmission congestion.
- Offering transmission service at non-pancaked rates: Competitive benefits result from eliminating pancaked transmission rates within the broadest possible energy trading area.
- Improving Operations: A single OASIS operator over an area of sufficient regional scope will better allocate scarcity as regional transmission demand is assessed; promote simplicity and "one-stop shopping" by reserving and scheduling transmission use over a larger area; and lower costs by reducing the number of OASIS sites.
- Planning and coordinating transmission expansion: Necessary transmission expansion would be more efficient if planned and coordinated over a larger region.

The Commission notes that where a proposed regional transmission entity may be of sufficient scope for some RTO purposes, but not others, an RTO may be able to achieve sufficient "effective scope" by coordination and agreements with neighboring entities, or by participating in a group of RTOs with either hierarchical control or a system of very close coordination. The Commission does not foreclose the possibility that an RTO may satisfy some of the minimum characteristics and functions by itself, while satisfying others through a strong cooperative agreement with neighboring RTOs to create a "seamless trading area."

The Commission, in evaluating an RTO's boundaries, will consider the extent to which the proposed boundaries: (1) facilitate performing essential RTO functions and achieving RTO goals; (2) encompass one contiguous geographic area; (3) encompass a highly interconnected portion of the grid; (4) deter the exercise of market power; (5) recognize trading patterns; (6) take into account existing regional boundaries (e.g., NERC regions) to the extent consistent with the Commission's goals for RTOs; (7) encompass existing regional transmission entities; (8) encompass existing control areas; and (9) take into account international boundaries. The Commission does not intend these factors to be exclusive: other factors may have merit for a particular region.

To satisfy the scope and configuration characteristic of the Final Rule, all or most of the transmission facilities in a region must be included in the RTO. The Commission recognizes, however, that the proponents of an RTO may not be able to obtain agreement by all transmission owners in a region of appropriate scope and configuration to transfer operating control of their facilities to the RTO. This may occur, for example, because certain facilities may be owned by governmental entities that have

restrictions on transfer of control that may require time to resolve. The Commission does not believe that it would be desirable to deny RTO status or delay RTO start-up where the transmission owners representing a large majority of the facilities within a region are ready to move forward, while a few others are not. If an RTO proposal does not cover all the transmission facilities within its proposed region, it should identify the reasons for this, any continuing efforts to include all facilities, and any interim arrangements with the non-represented facility owners to coordinate transmission functions within the region. The Commission may at a future time determine whether the use of its authorities under FPA sections 202(a) and 206 is appropriate to rationalize proposed regions.

3. Operational Authority (Characteristic 3)

The Commission reaffirms the determination proposed in the NOPR that an RTO must have operational authority for all transmission facilities under its control and also must be the NERC security coordinator for its region.² This operational control includes, but is not limited to, switching transmission elements into and out of operation in the transmission system (e.g., transmission lines and transformers), monitoring and controlling real and reactive power flows, monitoring and controlling voltage levels, and scheduling and operating reactive resources.

The Commission recognizes that the feasibility of consolidating existing control areas into a single control area may be limited by cost and technical considerations. As proposed in the NOPR, the Commission will not at this time require the RTO to operate what traditionally has been thought of as a single control area for its region. However, the RTO must perform the control functions required to satisfy the minimum characteristics and functions in this Final Rule, including the transmission control and security coordinator functions discussed above, in a non-discriminatory manner for all market participants.

² As security coordinator, the RTO will assume responsibility for: (1) performing load-flow and stability studies to anticipate, identify and address security problems; (2) exchanging security information with local and regional entities; (3) monitoring real-time operating characteristics such as the availability of reserves, actual power flows, interchange schedules, system frequency and generation adequacy; and (4) directing actions to maintain reliability, including firm load shedding.

4. Short-Term Reliability (Characteristic 4)

The Commission adopts the proposal in the NOPR that the RTO must have exclusive authority for maintaining the short-term reliability of the grid that it operates.³ The Commission does not require the RTO to rely on market mechanisms in every instance to maintain short-term reliability. The Commission believes that some reliability functions may not be conducive to supply through competitive market mechanisms since many reliability functions are, in economic terms, "public goods."

a. Interchange Scheduling

The Commission finds that the RTO must have exclusive authority for receiving, confirming and implementing all interchange schedules, which are often coincident with schedules for unbundled transmission service. If the RTO structure includes control area operators who are market participants or affiliated with market participants, the RTO will have the authority to direct the implementation of all interchange schedules.

In the event that the RTO filing includes a structure in which non-RTO control area operators receive sensitive information, the Commission requires the RTO to monitor for any unfair competitive advantage, and report to the Commission immediately if problems are detected. In addition, to address concerns about protecting commercially sensitive information, the Commission requires the RTO or any entities who operate control areas within the RTO's region that require access to commercially sensitive information to sign agreements that separate reliability personnel and the relevant information they receive from their wholesale merchant personnel.

b. Redispatch Authority

The Commission states that the RTO must have the right to order the redispatch of any generator connected to the transmission facilities it operates, if necessary for the reliable operation of the transmission system.⁴ It requires each RTO to develop procedures for generators to offer their services and to compensate generators that are redispatched for reliability. In general, the Commission believes redispatch control should be through a market where the generators offer their services and the RTO chooses the least cost options. However, for reliability purposes, the RTO is to have full

³ The Commission clarifies that the term "short-term" is intended to cover transmission reliability responsibilities short of grid capacity enhancement and includes all time periods, including but not limited to "real-time," necessary for the RTO to satisfy its reliability responsibilities, up to the planning horizon.

⁴ The Commission clarifies that it intends authority for generator redispatch to be used by the RTO to prevent or manage emergency situations, such as abnormal system conditions that require automatic or immediate manual action to prevent or limit equipment damage or the loss of facilities or supply that could adversely affect the reliability of the electric system, or to restore the system to a normal operating state.

authority to order the redispach of any generator, subject to existing environmental and operating restrictions that may limit a generator's ability to change its dispatch.

c. Transmission Maintenance Approval

The Commission finds that, when the RTO operates transmission facilities owned by other entities, the RTO must have authority to approve and disapprove all requests for scheduled outages of transmission facilities to ensure that the outages can be accommodated within established reliability standards.

If the RTO requires a transmission owner to reschedule a previously-approved planned maintenance outage, the Commission states that the transmission owners should be compensated for any costs created by the required rescheduling.

The Commission also encourages the RTO to establish performance standards for transmission facilities under its direct or contractual control. Such standards could take the form of targets for planned and unplanned outages. The rationale for this requirement is that two transmission owners should not receive equal compensation if one owner operates a reliable transmission facility while the other operates an unreliable facility. For RTOs that are transcos, the Commission requires that such quality standards be made explicit in any rate proposal.

d. Generation Maintenance Approval

The Commission concludes that the RTO is not required to have authority over proposed generation maintenance schedules. However, it acknowledges that there are reliability advantages to the RTO having this authority, and would accept RTO proposals where the participants choose to grant the RTO such authority. Because of this close connection between generation and maintenance of system reliability, the Commission finds that it is essential for generator owners and operators to provide the RTO with advance knowledge of planned generation outage schedules so that the RTO can incorporate this information into its reliability studies and operations plan but states that the RTO should be prohibited from sharing that information with any other market participants, or affiliates of market participants.

e. Facility Ratings

After consideration of the comments, the Commission concludes that is inappropriate to require RTOs to establish transmission facility ratings. It recommends that such ratings to be determined, to the extent practical, by mutual consent of the transmission owner and the RTO, taking into account local codes, age and past usage of the facilities.

f. Liability

The Commission will determine the extent of RTO liability relating to its reliability activities on a case-by-case basis.

g. Reliability Standards

The Commission concludes that the RTO must perform its functions consistent with established NERC (or its successor) reliability standards, and notify the Commission immediately if implementation of these or any other externally established reliability standards will prevent it from meeting its obligation to provide reliable, non-discriminatory transmission service.

E. Minimum Functions of an RTO

1. Tariff Administration and Design (Function 1)

The Commission adopts the NOPR's requirement that the RTO be the sole provider of transmission service and sole administrator of its own open access tariff and as such must be solely responsible for approving requests for transmission service, including interconnection. The RTO must have the independent authority to file tariff changes. The Commission concludes that a single provider, administrator, and tariff were necessary in order to ensure nondiscriminatory and uniform access to regional transmission facilities. Mere monitoring and dispute resolution by the RTO are insufficient.

2. Congestion Management (Function 2)

The Commission adopts the NOPR requirement that an RTO develop market mechanisms to manage congestion. Because the use of such mechanisms must necessarily be closely coordinated with the RTO's operational activities, the RTO must either operate the market mechanisms itself or provide for operation by an entity that is not affiliated with any market participant.

The Commission states its belief that market mechanisms to manage congestion are superior to approaches that do not take into account the relative value of transactions. Because the Commission disagrees that a centralized market for congestion management would interfere with a robust market in forward contracts for energy, it does not specify the degree of centralization. It does require, however, a market mechanism that provides all transmission customers with efficient price signals regarding transmission use decisions to ensure least cost dispatching and system use by those that value it most. The Commission states that price signals can also assist in determining the efficient size and location of new generation and grid expansions, but cannot be relied upon alone. With prescribing a pricing mechanism, the Commission endorses locational marginal pricing and financial rights for firm transmission service. It

expresses skepticism about the effectiveness of tradable firm transmission rights in the absence of locational marginal pricing.

The Commission allows RTOs one year after start-up to implement market mechanisms for managing congestion but requires that, upon start-up, the RTO is to have in place effective protocols for managing congestion while preserving reliability.

3. Parallel Path Flow (Function 3)

The Commission reaffirms that an RTO should develop and implement procedures to address parallel path flow issues. It directs RTOs to work closely with NERC, or its successor organization, to resolve this issue. It also clarifies that it would not prevent addressing parallel path flow issues on a larger-than-single-RTO basis. In fact, the Commission requires RTOs to develop and implement procedures for addressing parallel flow issues with other regions.

The Commission directs that the RTO have measures in place at initial operation to address internal parallel path flow issues, and allows three years for implementing measures to address parallel path flow issues between RTO regions.

The Commission acknowledges that measures to address parallel path flows and the RTO's role as sole transmission provider will diminish the ability of transmission users to choose among different contract paths. The Commission believes that this consequence is outweighed by the advantage of the ability to move power anywhere within the RTO at a single rate and under a single set of terms and conditions.

4. Ancillary Services (Function 4)

The Commission concludes an RTO must be the provider of last resort of all ancillary services. It clarifies that, because it was not requiring the RTO to be a single control area operator, and the RTO might not own generation, the RTO need not be the direct supplier. Regardless of the mechanism, however, the ancillary services must be included in the RTO-administered tariff.

All market participants must continue to have the option of self-supplying or acquiring ancillary services from third parties. The RTO must determine whether the transmission customer has adequately obtained these services.

The Commission requires that the RTO 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; must directly or indirectly control all facilities that provide ancillary services; and must promote the development of competitive markets for ancillary services whenever feasible.

The Commission adopts the NOPR's requirement that an RTO must ensure that its transmission customers have access to a real-time balancing market that is

developed and operated by either the RTO itself or another entity that is not affiliated with any market participant.

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

The Commission reaffirms that an RTO must be the single OASIS site administrator for all transmission facilities under its control because independent RTOs can be trusted to maintain an OASIS site with reliable and current data that is easy to use and a single OASIS site for each region instead of multiple sites will enable transactions to be carried out more efficiently.

It clarifies the RTO did not need itself to operate the OASIS for its region, but merely that there must be no more than one OASIS site for the facilities under the RTO's control (although there could be one OASIS for more than one RTO), and the OASIS site operator must have the same attributes of independence as an RTO.

The Commission affirms that the RTO itself must calculate ATC values based on data developed partially or totally by the RTO. When data are supplied by others, the RTO must create a system for tests and checks that ensure customers of coordinated and unbiased data. RTOs should coordinate ATC values with adjacent regions. An RTO OASIS site, including ATC calculations, must be fully operational at this level of service upon commencement of service. In the event of a dispute over ATC values, the RTO's values should be used pending the outcome of a dispute resolution process. Each RTO must develop procedures to validate its ATC values.

6. Market Monitoring (Function 6)

The Commission reaffirms its belief that an RTO must perform a market monitoring function, so that the Commission can evaluate and regulate the market, despite many concerns about the RTO intruding into the markets. The Commission recognizes, however, that different market monitoring plans are likely to be appropriate for different RTOs. Consequently, the Commission requires that RTO proposals contain a market monitoring plan that identifies what the RTO participants believe are the appropriate monitoring activities the RTO, or an independent monitor, if appropriate, will perform.

The Commission states that RTO must propose a monitoring plan that accomplished certain standard tasks: ensuring objective information about the markets that the RTO operates or administers and a vehicle to propose appropriate action regarding issues identified by that information; evaluating the behavior of market participants to determine whether their behavior adversely affects the ability of the RTO to full its responsibilities; periodically assessing whether behavior in other markets in the RTO's region affects RTO operations and, conversely, how RTO operations affect the efficiency of other markets; and filing reports on opportunities for efficiency improvement, market design flaws and market power abuses in the RTO's markets with

the Commission and affected regulatory authorities. The Commission requires the RTO to identify the markets to be monitored, examine their structure, compliance with market rules, behavior of individual market participants and the market as a whole, and market power and market power abuses; addresses how information will be used and reported; identify any proposed sanctions or penalties and the specific conduct to which they would be applied, provide the rationale to support any sanctions, penalties or remedies (financial or otherwise) and explain how they would be implemented; and indicate the types and frequency of reports that will be made and to whom the reports will be sent. The Commission notes that it is not requiring the collection of data the RTO would not collect in its ordinary course of business.

7. Planning and Expansion (Function 7)

The Commission reaffirms the NOPR requirement that an RTO must (1) encourage market-motivated operating and investment actions for preventing and relieving congestion; (2) accommodate efforts by state regulatory commissions to create multi-state agreements to review and approve new transmission facilities, coordinated with programs of existing Regional Transmission Groups (RTGs) where necessary; and (3) file a plan with the Commission with specified milestones that will ensure that it meets the overall planning and expansion requirement no later than three years after initial operation, if the RTO is unable to satisfy this requirement when it commences operation. In the alternative, the RTO must demonstrate that an alternative proposal is consistent with or superior to these three requirements.

As the transmission provider in the region, the RTO is required to provide service under a tariff that is consistent with or superior to the Commission's pro forma tariff, and that tariff obligates the transmission provider to expand and modify its system to provide the services requested under the pro forma tariff. Because an RTO may not own all of the facilities it operates, public utilities are still obligated to expand or upgrade its transmission system upon request. The Commission expresses its preference for market-based plans, and noted that the pricing mechanisms and actions used by the RTO as part of its transmission planning and expansion program should be compatible with the pricing signals for shorter-term solutions to transmission constraints (*i.e.*, congestion management) so that market participants can choose the least-cost response.

8. Interregional Coordination (Function 8)

In response to comments, the Commission adds a more general inter-regional coordination requirement as one of the minimum RTO functions. It requires an RTO to develop mechanisms to coordinate its activities with other regions whether or not an RTO yet exists in these other regions or to propose reporting requirements, including a schedule, for itself to provide follow-up details as to how it is meeting the coordination requirements of this function. An RTO must ensure the integration of reliability and market interface practices either by developing integration practices itself or by cooperating in the development of integrated practices with an independent entity that

covers all regions or, for reliability practices, covers an entire interconnection, i.e., any one of three large U.S. transmission systems. The Commission does not mandate that all RTOs have a uniform practice, but that RTO reliability and market interface practices must be compatible with each other, especially at the "seams."

F. Open Architecture

In the NOPR, the Commission stated its commitment to a policy of "open architecture" and proposed to require that RTOs be designed so that they can evolve over time, finding that there should be no provision in any RTO proposal that precludes the RTO and its members from improving their organization to meet market needs. The Final Rule adopts this principle.

The Commission requires that RTOs have the ability to evolve over time. For example, open architecture will allow basic changes in the organizational form of the RTO to reflect changes in facility ownership and revised corporate strategies. It will also accommodate changes in the geographical scope of RTOs and operational needs.

G. Transmission Ratemaking Policy for RTOs

1. Pancaked Rates

The Commission affirms that the RTO tariff must not result in transmission customers paying multiple access charges to recover capital costs but reiterates that the Commission will continue to be receptive to distance-sensitive rates and other rate features that can be supported.

2. Reciprocal Waiving of Access Charges Between RTOs

The Commission continues to encourage reciprocal waivers of access charges between RTOs as long as they are reasonable in terms of cost recovery, cost shifting, efficiency, and discrimination. The Commission adds an RTO function to integrate reliability and market interface practices with other regions.

3. Uniform Access Charges

The Commission concludes that it should continue to provide flexibility with respect to RTO proposals for allocation of fixed transmission cost recovery. It will permit RTO proposals to use "license plate" rates (i.e., rates that vary within an RTO, depending on the location to which energy is delivered) for several reasons: (1) commenters overwhelmingly support the use of license plate rates, and demonstrated convincingly that problems associated with cost-shifting are not easily resolved by means other than the use of license plate rates and (2) the concern that the potential for cost-shifting could act as an impediment to RTO formation.

A difficult issue for the Commission was whether or not to permit use of license plate rates as a permanent feature. The Commission decided to allow RTOs to propose the use of license plate rates for a fixed term of the RTO's choosing. However, RTOs that propose the use of license plate rates must make clear how transmission expansion will be priced, that is, whether license plate rates or some other mechanism will be applied to the cost of new transmission facilities, and how such pricing affects incentives for efficient expansion. In addition, the Commission requires that before the end of the fixed term, the RTO must complete an evaluation of fixed cost recovery policies based on the factual situation of the particular RTO, and file with the Commission its recommendations on any changes that should be instituted. The Commission emphasizes that it is not requiring that the RTO continue or abandon the use of license plate rates at that time, but will require the RTO to justify its choice to continue or discontinue using license plate rates, or otherwise change the method for fixed cost recovery.

4. Congestion Pricing

The Commission reemphasizes the basic principles for congestion pricing articulated in the NOPR, *i.e.*, that proposals should "ensure that the generators that are dispatched in the presence of transmission constraints must be those that can serve system loads at least cost, and limited transmission capacity should be used by market participants that value that use most highly." Rather than prescribe a specific method, the Commission encourages experimentation with reasonable congestion management techniques.

5. Service to Transmission-Owning Utilities That Do Not Participate in an RTO

The Commission will permit an RTO and its transmission-owning public utility members to make the case that it is just and reasonable to charge individual system rates to a transmission customer who is a non-participating transmission owner in its RTO region. These proposals must be justified on a case-by-case basis and recognize the various situations (such as legal obstacles) of non-participating transmission owners.

Such a proposal would not apply to a non-participating transmission owner in another region. However, an RTO could argue that the non-participant should be part of its RTO region based on engineering or other objective criteria.

6. Performance-Based Rate Regulation ("PBR")

The Commission believes that it should encourage but not mandate RTOs to use PBR and that, although the application of PBR may vary according to the type of RTO, there is no reason to limit the applicability of PBR to certain members or versions of RTOs.

The Commission welcomes RTO filings with PBR proposals from any source. For example, in the context of an ISO or a tiered ISO/transco that has been described by some commenters, the activities that contribute to performance may be shared between the RTO and the transmission owners. This does not invalidate the use of PBRs; however, the RTO design would simply ensure that the rewards and penalties associated with activities performed by transmission owners flow through to the owners to achieve the desired result. In addition, the Commission sees no impediment to the use of PBR to provide incentives for efficient behavior by non-profit RTOs. It notes that some existing ISOs have in place performance incentives for some of their managers, and such an incentive scheme may have application for RTOs which do not own the transmission assets they control.

A threshold issue is how PBR proposals will be formulated and when they will be filed. The Commission recognizes that PBR design involves highly complicated issues, and that there is the possibility that a bad PBR proposal can result in lower quality transmission service, at higher costs, compared with service that might prevail under traditional ratemaking practices. The Commission believes that the best PBR designs will emerge when all stakeholders have an opportunity for input, even if a filed PBR design does not represent full consensus.

The Commission encourages RTOs to file fully documented PBR proposals that are consistent with the amended regulatory text. PBR proposals should include a detailed explanation of how the PBR mechanism will work, as well as all of the information necessary for the Commission and all market participants to evaluate the benefits and costs of implementing the PBR mechanism.

Based on the comments received in this docket, as well as its understanding of international and state experience with incentive regulation, the Commission offers certain principles for RTOs to consider in designing PBR proposals: (1) PBR should not be applied piecemeal; (2) PBR should encompass both rewards and penalties; (3) PBR rewards and penalties should create incentives for an RTO to make efficient operating and investment decisions, and should not compromise system reliability; (4) the benefits of PBR should be shared between the RTO and its customers; and (5) to the extent possible, the rewards and penalties should be prescribed in advance based on known and measurable benchmarks.

7. Other RTO Transmission Ratemaking Reforms

The Final Rule, the Commission provides greater specificity with respect to certain transmission pricing mechanisms that may be appropriate for RTOs. However, the Commission emphasizes that this policy guidance should not be interpreted as a Commission regulatory requirement for a specific transmission pricing method, nor should it be interpreted as a guarantee that the Commission will approve any particular innovative pricing proposal. All innovative pricing proposals filed by RTOs must be fully and adequately supported. If industry participants believe that further guidance from the

Commission is needed to resolve transmission pricing issues, they may request such guidance through requests for declaratory orders or further rulemakings.

a. Return on Equity (“ROE”)

The Final Rule addresses a number of issues related to return on equity. The Commission agrees that the uncertainty associated with the transition of the industry, and in particular participation in RTOs, may increase risks in the short-run and invites RTOs to submit proposals for ROE-based programs that are in conformance with these new approaches, possibly including a formula rate for ROE (which was previously barred) or a moratorium on changes to ROE or rate levels. The Commission recognizes that historical data typically used to evaluate ROEs may not be reliable and notes that, as patterns of transmission ownership and control evolve, new approaches to compensating transmission owners for different capital structure mixes may be warranted, including allowing a transmission owner to seek a return on invested capital, independent of its exact capital mix.

b. Levelized Rates

The Commission believes that levelized rates are preferable in an RTO environment because all customers, regardless of when they take service, face the same price. The Commission recognizes the objection that allowing levelized rates for RTOs may raise RTO transmission rates in the short-run, however, The Commission concludes that levelized rates may be appropriate in circumstances, as here, where an RTO reflects a fresh start with respect to the provision of transmission services, and potentially the customers for those services. Also, the higher rates will address concerns that RTO formation will decrease revenues.

c. Accelerated Depreciation and Incremental Pricing for New Transmission Investments

The Commission makes a distinction between accelerated depreciation for existing transmission assets, and accelerated depreciation for new transmission facilities. While the Commission will not bar proposals of this type for existing assets, it “cannot give any encouragement to them”. On the other hand, The Commission states that it is appropriate to provide those willing to make new transmission investments with the flexibility to propose that such assets follow non-traditional depreciation schedules in order to remove disincentives for the construction of new facilities. In addition, The Commission believes it is appropriate for the Commission to provide flexibility for pricing of new facilities, such that proposals for pricing of new facilities that combine elements of incremental prices with embedded-cost access fees will be considered.

d. Acquisition Adjustments

A number of commenters suggested that the Commission adopt new policies for acquisition adjustments that would provide assurances to purchasers of transmission

facilities that acquisition premiums would be recoverable through transmission rates. The Commission does not adopt this suggestion in this Final Rule.

8. Additional Ratemaking Issues

The Commission clarifies that the reasonable costs of developing an RTO may be included in transmission rates.

9. Filing Procedures for Innovative Rate Proposals

The Commission will evaluate all RTO proposals including any innovative rate treatment based on the applicant's demonstration of how the proposed rate treatment would help achieve the goals of regional transmission organizations, including efficient use of and investment in the transmission system and reliability benefits. The Commission also requires applicants to provide a cost-benefit analysis, including rate impacts, and demonstrate that the proposed rate treatment is appropriate for the proposed RTO and that the rate proposal is just, reasonable, and not unduly discriminatory. Moreover, pricing proposals involving moratoriums and returns on equity that do not vary according to capital structure may not be included in RTO rates after January 1, 2005.

H. Other Issues

1. Public Power and Cooperative Participation in RTOs

For economic and reliability reasons, the Commission reaffirms that an RTO should include all transmission owners in a specific region, including governmental and quasi-governmental agencies. The Commission recognizes that public power entities and cooperatives face numerous regulatory and legal obstacles regarding RTO participation. It decides, however, to examine submitted proposals that provide public power and cooperatives with the flexibility to join an RTO without jeopardizing their tax or mortgage status on an RTO-by-RTO basis.

The Commission expects public power entities and cooperatives to participate in the process for forming RTOs and offered to make staff resources available to assist. The Commission states its intention to continue to support efforts to mitigate the "private use" and other tax restrictions.

2. Participation by Canadian and Mexican Entities

The Commission reiterates its belief that Canadian and Mexican involvement in RTOs would be beneficial. The Commission stresses that participation is voluntary for Canadian transmission owners and that the rule does not in any way require competition in retail electricity markets.

Under the final rule, Canadian entities that want to join an RTO may propose a cross-border RTO or a Canadian-only RTO that is compatible with the Rule. If a cross-border RTO forms, the Commission will consider proposals for joint regulatory oversight.

3. Existing Transmission Contracts

As in Order No. 888, the Commission declines to order generic abrogation of existing transmission contracts. It does, however, restate that it is unreasonable and discriminatory to maintain the pancaked rates in existing contracts for others when transmission-owning utilities have designed a non-pancaked rate approach for their own transactions. It states its intention to balance the preference for preservation of existing contracts with the importance of consistency in transmission pricing and the elimination of pancaked rates.

The Commission states it will address the issue of existing transmission contracts on an RTO-by-RTO basis. It encourages each RTO to address how and when it might convert existing contracts and submit a contract transition plan that contains specific details about the procedures to be utilized involving the conversion from existing contracts to RTO service.

4. Power Exchanges (PXs)

The Commission decides to allow each region to determine whether there is a need for a power exchange and whether the RTO should operate the power exchange.

5. Effect on Retail Markets and Retail Access

The Commission believes that RTOs can positively affect each state's implementation of its retail choice program, without interfering with those states that have not yet adopted such programs.

The Commission states that RTOs must control all transmission facilities that are necessary to support competitive wholesale power markets. It will judge any proposed reclassification on a case-by-case basis, and indicates it would not remove from the Commission's jurisdiction any facilities used to deliver power to wholesale customers. Furthermore, the Commission expects RTOs to remain flexible such that certain facilities may be reclassified as transmission as necessary.

6. Effect on States with Low Cost Generation

The Commission anticipates that the collaborative process will result in an RTO proposal that incorporates a design that, overall, increases the existing level of transmission system and market efficiency for each region. It does not expect that regions with no existing institutions will necessarily invest in new, high-cost RTO infrastructure, but nonetheless expects the RTO to satisfy the minimum characteristics and functions and to improve the efficiency of regional transmission service.

The Commission does not believe that an RTO will cause utilities to sell their lowest cost power out of state. While retail choice arguably might lead to low cost power being sold out of state because incumbent utilities no longer have an obligation

to serve local in-state loads, this would occur with or without an RTO in the region. Where there is no retail choice, the rule does not affect a state commission's authority to require a utility to sell its lowest cost power to native load.

7. States' Roles with Regard to RTOs

The Commission states that regional interests forming an RTO should consult with the states about the roles that best fit the agencies' authorities and preferences and the organizational form of the RTO.

8. Accounting Issues

The Commission does not attempt to prescribe specific changes to the existing Uniform System of Accounts that would accommodate the needs of all RTOs. At this time, it requires RTOs to conform their accounting to the Commission's system and to submit questions of doubtful interpretation to the Commission for individual or generic rulings.

The Commission acknowledges that changes in the industry require the Commission to re-examine its existing accounting and related reporting requirements. The Commission staff has been and will continue to meet with EEI and others, and will continue its efforts to address the specific changes that may be needed as the industry restructures.

The Commission will allow RTOs to propose alternative ratemaking methods including proposals to delay rate recovery of certain expenses. It stated its intention to take a flexible regulatory approach toward approving RTO rate design proposals.

9. Market Design Lessons

a. Multiple Product Markets

The Commission endorses bid-based markets to ramp resources up and down to balance the system, manage congestion, and to supply some ancillary services. It notes that efficiency is maximized when arbitrage opportunities reflected in the bids are exhausted (i.e., after the RTO's markets have cleared, no technically qualified market participant would have preferred to be in another of the RTO's markets). In addition, it notes that efficient bid-based markets elicit prices that are consistent with technical and cost requirements.

b. Physical Feasibility

The Commission states that proper design of the market clearing procedures ensures that prices balance the supply and demand for energy, and all transactions, in the aggregate, are physically feasible with appropriate levels of reserves.⁵

c. Access to Real-Time Balancing Market

The Commission acknowledges an increasing use of market mechanisms that rely on bids from generators for real-time balancing. It states its expectation that any RTO balancing markets will be available to all grid users, including those that engage in bilateral transactions. It notes that balancing does not require a moment-to-moment balance between the specific load and resources involved in individual bilateral transactions.

d. Market Participation

The Commission notes that markets are most efficient when generators and loads, whether internal or external to the RTO, are allowed full and flexible participation in the markets, but that the RTO must have generation and ancillary service quantity information, and any necessary technical information, from self-schedulers in order to balance the system and ensure reliability. Participants that self-schedule are expected to pay or be paid consequent cost and benefits at market prices. The Commission observes that unnecessary constraints on the imports of services can lead to increases in price volatility due to thin markets.

e. Demand-Side Bidding

The Commission states that demand-side bidding is advantageous to the extent it is technically feasible, because without it, demand response decreases, market power is easier to exercise, and price volatility increases.

f. Bidding Rules

The Commission states that allowing participants to bid a reasonable approximation of the costs they incur including start-up, minimum load, energy, and ramping costs helps provide for a more efficient dispatch of generating units to meet load and other services, because it allows the start-up decisions underlying the dispatch schedules to be based on prices and quantities for a period greater than a single hour.

⁵ The Commission notes that the California market design has allowed it to accept schedules that have not been physically feasible. It also remarks that the California ISO has encountered instances where transmission constraints have prevented the use of needed reserves, and that this is inconsistent with the operator's obligation to make certain that reserve requirements are met and that reserves, along with necessary transmission, are available to respond appropriately to contingencies.

g. Transaction Costs and Risk

The Commission states that transaction costs associated with participation in RTO markets should be low, and market participation should involve no unnecessary risks.

h. Price Recalculations

The Commission states that, although an RTO must ensure that the final market clearing prices are correct, market clearing procedures should minimize price recalculations and any price recalculation should be done quickly.

i. Multi-Settlement Markets

The Commission observes that for real-time markets, prices are determined by real-time dispatch quantities, and deviations from day-ahead schedules are priced at the real-time price. When day-ahead schedules are financially binding, they are financial commitments subject to payments for deviations at the real-time price. If needed for reliability, bids need to be physically binding and may be subject to Commission-approved penalties for failure to adhere to the bid. If bids for ancillary services are accepted, the accepted capacity must be physically ready to meet reliability commitments when called upon. The Commission notes that the lack of a physical capacity commitment has been a problem in some ISOs.

j. Preventing Abusive Market Power

The Commission notes certain characteristics that affect market power: (1) a market design that favors large players (e.g., portfolio bidding) may create an incentive for consolidation and resulting market power problems; (2) fewer restrictions on imports of services will help guard against thin markets; (3) artificially segmenting a product market into separate geographic markets can create additional price volatility and opportunities for the exercise of market power; and (4) non-binding bids can be used as a signaling device to facilitate collusive behavior.

k. Market Information and Market Monitoring

The Commission believes that an efficient market has market clearing prices and quantities being made available immediately. It states that eventual disclosures of individual bids will allow detection of market design and implementation flaws, and exposure of the exercise of market power, but further observes that such disclosure if made immediately might facilitate collusion. To detect the withholding of capacity, the Commission suggests a simple screen to provide the output, reserve quantities, and maximum capacity of each generator.

I. Prices and Cost Averaging

The Commission observes that market designs that base prices on the averaging or socialization of costs, may lead to economically inefficient outcomes. It states that cost causality principles should be used to price services and eliminate averaging. As an example, it notes that averaging mechanisms for congestion management do not send the correct price signals for the location of new generation.

I. **Collaborative Process**

The Commission emphasizes its commitment to a collaborative process whereby transmission owners, market participants, interest groups, and governmental officials can attempt to reach mutual agreement on how best to establish RTOs in their respective regions. It welcomes the participation of state Commissions, public utilities, public power entities and cooperative utilities, power marketing interests, consumer and environmental groups, and Canada and Mexico. It recognizes that different regions of the country are in different stages of RTO formation and that it must be flexible enough to allow for these differences. The Commission sets up a series of five workshops to develop a consensus agreement by regional participants establishing a strategic process and a schedule for any further collaboration. It expects all transmission owners to attend at least one workshop. Workshops will be held in the following cities in February, March or April 2000 in Philadelphia, Pennsylvania; Cincinnati, Ohio; Atlanta, Georgia; Kansas City, Missouri; and Las Vegas, Nevada.

Post-workshop meetings of parties in regions may be held with or without Commission staff participation. The Commission will make available the Commission's Alternative Dispute Resolution staff upon the request of an RTO group in formation.

J. **Implementation Issues**

1. Filing Requirements

All public utilities that are not part participating in an approved regional transmission entity that conforms to the Commission's ISO principles must file with the Commission by October 15, 2000 either: (1) a proposal for an RTO to be operational by December 15, 2000⁶ or (2) a description of efforts to participate in an RTO, any existing obstacles to RTO participation, and any plans to work toward RTO participation.

A public utility that is a member of an existing transmission entity that has been approved by the Commission as in conformance with the eleven ISO principles set forth

⁶ An RTO proposal must include a basic agreement filed under section 205 of the FPA setting out the rules, practices and procedures under which the RTO will be governed and operated, and requests by the public utility members of the RTO under section 203 of the FPA to transfer control of their jurisdictional transmission facilities from individual public utilities to the RTO.

in Order No. 888 must make a filing no later than January 15, 2001. That filing must explain the extent to which the transmission entity in which it participates meets the minimum characteristics and functions for an RTO, and either propose to modify the existing institution to the extent necessary to become an RTO, or explain the efforts, obstacles and plans with respect to conforming to these characteristics and functions.

2. Deadline for RTO Operation

RTOs must startup by December 15, 2001, implement congestion management by December 15, 2002, and implement the parallel path flow coordination and transmission planning and expansion functions by December 15, 2004. The Commission notes that it is not requiring control area consolidation; not requiring the establishment of a PX; allowing an RTO to meet its operational control obligation through indirect or hierarchical control arrangements via contractual agreements with the existing infrastructure such as transmission owners and control area operators; and allowing an RTO to satisfy its security coordinator functions through contractual arrangements with an external security coordinator, as long as it is independent. Moreover, it is allowing a longer phase-in period for functions that may be more difficult to establish, such as congestion management, parallel path flow measures, and transmission planning and expansion.

3. Commission Processing Procedures

The Commission states that, while it will attempt to process each RTO proposal as expeditiously as possible, certain RTO proposals will take longer to analyze and review depending upon the complexity of the issues and the level of support among the affected parties. Therefore, it identifies factors intended to assist public utilities in streamlining their required filings and help expedite the processing of the RTO proposals.

- Because of delayed implementation dates for various highly complex FPA section 205 related RTO provisions (congestion management by December 15, 2002, and parallel path flow coordination and transmission planning and expansion each by December 15, 2003), initial RTO proposals need only contain a commitment to complete the provision and a timetable for submitting appropriate future filings. The Commission will not need to act on those matters initially.
- Expeditious processing of an RTO submittal is more likely if the RTO proposal is the result of a comprehensive and open collaborative process with widespread support.
- Public utilities are permitted to file RTO proposals jointly with other entities.

- With the exception of governance, experience gained from past ISO proceedings, will be directly transferable whether the form of RTO is an ISO or a transco.

The Commission stated that submittal of RTO proposals that reflect the above factors should minimize the amount of time necessary to analyze and process the submittal. The Commission noted that the approved ISO forms of governance can be used as models for governance of RTOs that are ISOs.

4. Competing RTO Proposals

With regard to multiple RTO proposals that pertain to the same or overlapping regions, the Commission states its expectation that adherence to the collaborative process and the RTO scope and configuration factors it has identified should avoid such proposals.

Regulatory Text

PART 35 - FILING OF RATE SCHEDULES

1. The authority citation for Part 35 continues to read as follows:
Authority: 16 U.S.C. 791a-825r, 2601-2645; 31 U.S.C. 9701; 42 U.S.C. 7101-7352.
2. Part 35 is amended by adding a new Subpart F and a new § 35.34 to read as follows:

Subpart F - Procedures and Requirements Regarding Regional Transmission Organizations

§ 35.34 Regional Transmission Organizations.

(a) Purpose. This section establishes required characteristics and functions for Regional Transmission Organizations for the purpose of promoting efficiency and reliability in the operation and planning of the electric transmission grid and ensuring non-discrimination in the provision of electric transmission services. This section further directs each public utility that owns, operates, or controls facilities used for the transmission of electric energy in interstate commerce to make certain filings with respect to forming and participating in a Regional Transmission Organization.

(b) Definitions.

(1) Regional Transmission Organization means an entity that satisfies the minimum characteristics set forth in paragraph (j) of this section, performs the functions set forth in paragraph (k) of this section, and accommodates the open architecture condition set forth in paragraph (l) of this section.

(2) Market participant means:

(i) Any entity that, either directly or through an affiliate, sells or brokers electric energy, or provides transmission or ancillary services to the Regional Transmission Organization, unless the Commission finds that the entity does not have economic or commercial interests that would be significantly affected by the Regional Transmission Organization's actions or decisions; and

(ii) Any other entity that the Commission finds has economic or commercial interests that would be significantly affected by the Regional Transmission Organization's actions or decisions.

(3) Affiliate means the definition given in section 2(a)(11) of the Public Utility Holding Company Act (15 U.S.C. 79b(a)(11)).

(4) Class of market participants means two or more market participants with common economic or commercial interests.

(c) General rule. Except for those public utilities subject to the requirements of paragraph (h) of this section, every public utility that owns, operates or controls facilities used for the transmission of electric energy in interstate commerce as of **[effective date**

of Final Rule] must file with the Commission, no later than October 15, 2000, one of the following:

(1) A proposal to participate in a Regional Transmission Organization consisting of one of the types of submittals set forth in paragraph (d) of this section; or

(2) An alternative filing consistent with paragraph (g) of this section.

(d) Proposal to participate in a Regional Transmission Organization. For purposes of this section, a proposal to participate in a Regional Transmission Organization means:

(1) Such filings, made individually or jointly with other entities, pursuant to sections 203, 205 and 206 of the Federal Power Act (16 U.S.C. 824b, 824d, and 824e), as are necessary to create a new Regional Transmission Organization;

(2) Such filings, made individually or jointly with other entities, pursuant to sections 203, 205 and 206 of the Federal Power Act (16 U.S.C. 824b, 824d, and 824e), as are necessary to join a Regional Transmission Organization approved by the Commission on or before the date of the filing; or

(3) A petition for declaratory order, filed individually or jointly with other entities, asking whether a proposed transmission entity would qualify as a Regional Transmission Organization and containing at least the following:

(i) A detailed description of the proposed transmission entity, including a description of the organizational and operational structure and the intended participants;

(ii) A discussion of how the transmission entity would satisfy each of the characteristics and functions of a Regional Transmission Organization specified in paragraphs (j), (k) and (l) of this section;

(iii) A detailed description of the Federal Power Act section 205 rates that will be filed for the Regional Transmission Organization; and

(iv) A commitment to make filings pursuant to sections 203, 205 and 206 of the Federal Power Act (16 U.S.C. 824b, 824d, and 824e), as necessary, promptly after the Commission issues an order in response to the petition.

(4) Any proposal filed under this paragraph (d) must include an explanation of efforts made to include public power entities in the proposed Regional Transmission Organization.

(e) Innovative transmission rate treatments for Regional Transmission Organizations.

(1) The Commission will consider authorizing any innovative transmission rate treatment, as discussed in this paragraph (e), for an approved Regional Transmission Organization. An applicant's request must include:

(i) A detailed explanation of how any proposed rate treatment would help achieve the goals of Regional Transmission Organizations, including efficient use of and investment in the transmission system and reliability benefits to consumers;

(ii) A cost-benefit analysis, including rate impacts; and

(iii) A detailed explanation of why the proposed rate treatment is appropriate for the Regional Transmission Organization.

The applicant must support any rate proposal under this paragraph (e) as just, reasonable, and not unduly discriminatory or preferential.

(2) For purposes of this paragraph (e), innovative transmission rate treatment means any of the following:

(i) A transmission rate moratorium, which may include proposals based on formerly bundled retail transmission rates;

(ii) Rates of return that (a) are formulary; (b) consider risk premiums and account for demonstrated adjustments in risk; or (c) do not vary with capital structure;

(iii) Non-traditional depreciation schedules for new transmission investment;

(iv) Transmission rates based on levelized recovery of capital costs;

(v) Transmission rates that combine elements of incremental cost pricing for new transmission facilities with an embedded-cost access fee for existing transmission facilities; or

(vi) Performance-based transmission rates.

(3) A request for performance-based transmission rates under this paragraph (e) may include factors such as:

(i) A method for calculating initial transmission rates (including price caps and any provisions for discounting);

(ii) A mechanism for adjusting initial rates, which may be derived from or based upon external factors or indices or a specific performance measure;

(iii) Time periods for redetermining initial rates; and

(iv) Costs to be excluded from performance-based rates.

(4) An innovative transmission rate treatment or any other rate proposal made for an approved Regional Transmission Organization may be requested as part of any filing that is made under paragraph (d) of this section or in any subsequent rate change proposal under section 205 of the Federal Power Act (16 U.S.C. 824d). Unless otherwise ordered by the Commission, an approved Regional Transmission Organization may not include in rates any innovative transmission rate treatment under paragraphs (e)(2)(i) and (e)(2)(ii)(c) of this section after January 1, 2005.

(f) Transfer of operational control. Any public utility's proposal to participate in a Regional Transmission Organization filed pursuant to paragraph (c)(1) of this section must propose that operational control of that public utility's transmission facilities will be transferred to the Regional Transmission Organization on a schedule that will allow the Regional Transmission Organization to commence operating the facilities no later than December 15, 2001.

Note to paragraph (f): The requirement in paragraph (f) of this section may be satisfied by proposing to transfer to the Regional Transmission Organization ownership of the facilities in addition to operational control.

(g) Alternative filing. Any filing made pursuant to paragraph (c)(2) of this section must contain:

(1) A description of any efforts made by that public utility to participate in a Regional Transmission Organization;

(2) A detailed explanation of the economic, operational, commercial, regulatory, or other reasons the public utility has not made a filing to participate in a Regional Transmission Organization, including identification of any existing obstacles to participation in a Regional Transmission Organization; and

(3) The specific plans, if any, the public utility has for further work toward participation in a Regional Transmission Organization, a proposed timetable for such activity, an explanation of efforts made to include public power entities in the proposed Regional Transmission Organization, and any factors (including any law, rule or

regulation) that may affect the public utility's ability or decision to participate in a Regional Transmission Organization.

(h) Public utilities participating in approved transmission entities. Every public utility that owns, operates or controls facilities used for the transmission of electric energy in interstate commerce as of **[effective date of Final Rule]**, and that has filed with the Commission on or before **[effective date of Final Rule]** to transfer operational control of its facilities to a transmission entity that has been approved or conditionally approved by the Commission on or before **[effective date of Final Rule]** as being in conformance with the eleven ISO principles set forth in Order No. 888, FERC Statutes and Regulations, Regulations Preamble January 1991-June 1996 ¶ 31,036 (Final Rule on Open Access and Stranded Costs), must, individually or jointly with other entities, file with the Commission, no later than January 15, 2001:

(1) A statement that it is participating in a transmission entity that has been so approved;

(2) A detailed explanation of the extent to which the transmission entity in which it participates has the characteristics and performs the functions of a Regional Transmission Organization specified in paragraphs (j) and (k) of this section and accommodates the open architecture conditions in paragraph (l) of this section; and

(3) To the extent the transmission entity in which the public utility participates does not meet all the requirements of a Regional Transmission Organization specified in paragraphs (j), (k), and (l) of this section,

(i) A proposal to participate in a Regional Transmission Organization that meets such requirements in accordance with paragraph (d) of this section,

(ii) A proposal to modify the existing transmission entity so that it conforms to the requirements of a Regional Transmission Organization, or

(iii) A filing containing the information specified in paragraph (g) of this section addressing any efforts, obstacles, and plans with respect to conformance with those requirements.

(i) Entities that become public utilities with transmission facilities. An entity that is not a public utility that owns, operates or controls facilities used for the transmission of electric energy in interstate commerce as of **[effective date of Final Rule]**, but later becomes such a public utility, must file a proposal to participate in a Regional Transmission Organization in accordance with paragraph (d) of this section, or an alternative filing in accordance with paragraph (g) of this section, by October 15, 2000 or 60 days prior to the date on which the public utility engages in any transmission of electric energy in interstate commerce, whichever comes later. If a proposal to participate in accordance with paragraph (d) of this section is filed, it must propose that operational control of the applicant's transmission system will be transferred to the Regional Transmission Organization within six months of filing the proposal.

(j) Required characteristics for a Regional Transmission Organization. A Regional Transmission Organization must satisfy the following characteristics when it commences operation:

(1) Independence. The Regional Transmission Organization must be independent of any market participant. The Regional Transmission Organization must include, as part of its demonstration of independence, a demonstration that it meets the following:

(i) The Regional Transmission Organization, its employees, and any non-stakeholder directors must not have financial interests in any market participant.

(ii) The Regional Transmission Organization must have a decision making process that is independent of control by any market participant or class of participants.

(iii) The Regional Transmission Organization must have exclusive and independent authority under section 205 of the Federal Power Act (16 U.S.C. 824d), to propose rates, terms and conditions of transmission service provided over the facilities it operates.

Note to paragraph (j)(1)(iii): Transmission owners retain authority under section 205 of the Federal Power Act (16 U.S.C. 824d) to seek recovery from the Regional Transmission Organization of the revenue requirements associated with the transmission facilities that they own.

(2) Scope and regional configuration. The Regional Transmission Organization must serve an appropriate region. The region must be of sufficient scope and configuration to permit the Regional Transmission Organization to maintain reliability, effectively perform its required functions, and support efficient and non-discriminatory power markets.

(3) Operational authority. The Regional Transmission Organization must have operational authority for all transmission facilities under its control. The Regional Transmission Organization must include, as part of its demonstration of operational authority, a demonstration that it meets the following:

(i) If any operational functions are delegated to, or shared with, entities other than the Regional Transmission Organization, the Regional Transmission Organization must ensure that this sharing of operational authority will not adversely affect reliability or provide any market participant with an unfair competitive advantage. Within two years after initial operation as a Regional Transmission Organization, the Regional Transmission Organization must prepare a public report that assesses whether any division of operational authority hinders the Regional Transmission Organization in providing reliable, non-discriminatory and efficiently priced transmission service.

(ii) The Regional Transmission Organization must be the security coordinator for the facilities that it controls.

(4) Short-term reliability. The Regional Transmission Organization must have exclusive authority for maintaining the short-term reliability of the grid that it operates. The Regional Transmission Organization must include, as part of its demonstration with respect to reliability, a demonstration that it meets the following:

(i) The Regional Transmission Organization must have exclusive authority for receiving, confirming and implementing all interchange schedules.

(ii) The Regional Transmission Organization 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.

(iii) When the Regional Transmission Organization operates transmission facilities owned by other entities, the Regional Transmission Organization 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.

(iv) If the Regional Transmission Organization operates under reliability standards established by another entity (e.g., a regional reliability council), the Regional Transmission Organization must report to the Commission if these standards hinder it from providing reliable, non-discriminatory and efficiently priced transmission service.

(k) Required functions of a Regional Transmission Organization. The Regional Transmission Organization must perform the following functions. Unless otherwise noted, the Regional Transmission Organization must satisfy these obligations when it commences operations.

(1) Tariff administration and design. The Regional Transmission Organization must administer its own transmission tariff and employ a transmission pricing system that will promote efficient use and expansion of transmission and generation facilities. As part of its demonstration with respect to tariff administration and design, the Regional Transmission Organization must satisfy the standards listed in paragraphs (k)(1)(i) and (ii) of this section, or demonstrate that an alternative proposal is consistent with or superior to satisfying such standards.

(i) The Regional Transmission Organization 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. The Regional Transmission Organization must have the sole authority to receive, evaluate, and approve or deny all requests for transmission service. The Regional Transmission Organization must have the authority to review and approve requests for new interconnections.

(ii) Customers under the Regional Transmission Organization tariff must not be charged multiple access fees for the recovery of capital costs for transmission service over facilities that the Regional Transmission Organization controls .

(2) Congestion management. The Regional Transmission Organization must ensure the development and operation of market mechanisms to manage transmission congestion. As part of its demonstration with respect to congestion management, the Regional Transmission Organization must satisfy the standards listed in paragraph (k)(2)(i) of this section, or demonstrate that an alternative proposal is consistent with or superior to satisfying such standards.

(i) 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 Regional Transmission Organization must either operate such markets itself or ensure that the task is performed by another entity that is not affiliated with any market participant.

(ii) The Regional Transmission Organization 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.

(3) Parallel path flow. The Regional Transmission Organization must develop and implement procedures to address parallel path flow issues within its region and with other regions. The Regional Transmission Organization must satisfy this requirement with respect to coordination with other regions no later than three years after it commences initial operation.

(4) Ancillary services. The Regional Transmission Organization must serve as a provider of last resort of all ancillary services required by Order No. 888, FERC Statutes and Regulations, Regulations Preamble January 1991-June 1996 ¶ 31,036 (Final Rule on Open Access and Stranded Costs), and subsequent orders. As part of its demonstration with respect to ancillary services, the Regional Transmission Organization must satisfy the standards listed in paragraphs (k)(4)(i)-(iii) of this section, or demonstrate that an alternative proposal is consistent with or superior to satisfying such standards.

(i) All market participants must have the option of self-supplying or acquiring ancillary services from third parties subject to any restrictions imposed by the Commission in Order No. 888, FERC Statutes and Regulations, Regulations Preamble January 1991-June 1996 ¶ 31,036 (Final Rule on Open Access and Stranded Costs), and subsequent orders.

(ii) The Regional Transmission Organization 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 Regional Transmission Organization. The Regional Transmission Organization must promote the development of competitive markets for ancillary services whenever feasible.

(iii) The Regional Transmission Organization must ensure that its transmission customers have access to a real-time balancing market. The Regional Transmission Organization 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.

(5) OASIS and Total Transmission Capability (TTC) and Available Transmission Capability (ATC). The Regional Transmission Organization must be the single OASIS site administrator for all transmission facilities under its control and independently calculate TTC and ATC.

(6) Market monitoring. To ensure that the Regional Transmission Organization provides reliable, efficient and not unduly discriminatory transmission service, the Regional Transmission Organization must provide for objective monitoring of markets it operates or administers to identify market design flaws, market power abuses and opportunities for efficiency improvements, and propose appropriate actions. As part of its demonstration with respect to market monitoring, the Regional Transmission Organization must satisfy the standards listed in paragraphs (k)(6)(i)-(iii) of this section, or demonstrate that an alternative proposal is consistent with or superior to satisfying such standards.

(i) Market monitoring must include monitoring the behavior of market participants in the region, including transmission owners other than the Regional Transmission Organization, if any, to determine if their actions hinder the Regional Transmission Organization in providing reliable, efficient and not unduly discriminatory transmission service.

(ii) With respect to markets the Regional Transmission Organization operates or administers, there must be a periodic assessment of how behavior in markets operated by others (e.g., bilateral power sales markets and power markets operated by unaffiliated power exchanges) affects Regional Transmission Organization operations

and how Regional Transmission Organization operations affect the efficiency of power markets operated by others.

(iii) Reports on opportunities for efficiency improvement, market power abuses and market design flaws must be filed with the Commission and affected regulatory authorities.

(7) Planning and expansion. The Regional Transmission Organization 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 its demonstration with respect to planning and expansion, the Regional Transmission Organization must satisfy the standards listed in paragraphs (k)(7)(i) and (ii) of this section, or demonstrate that an alternative proposal is consistent with or superior to satisfying such standards.

(i) The Regional Transmission Organization planning and expansion process must encourage market-driven operating and investment actions for preventing and relieving congestion.

(ii) The Regional Transmission Organization'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 Regional Transmission Organization's planning and expansion process must be coordinated with programs of existing Regional Transmission Groups (See § 2.21 of this chapter) where appropriate.

(iii) If the Regional Transmission Organization 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.

(8) Interregional coordination. The Regional Transmission Organization must ensure the integration of reliability practices within an interconnection and market interface practices among regions.

(l) Open architecture.

(1) Any proposal to participate in a Regional Transmission Organization must not contain any provision that would limit the capability of the Regional Transmission Organization to evolve in ways that would improve its efficiency, consistent with the requirements in paragraphs (j) and (k) of this section.

(2) Nothing in this regulation precludes an approved Regional Transmission Organization from seeking to evolve with respect to its organizational design, market design, geographic scope, ownership arrangements, or methods of operational control, or in other appropriate ways if the change is consistent with the requirements of this section. Any future filing seeking approval of such changes must demonstrate that the proposed changes will meet the requirements of paragraphs (j), (k) and (l) of this section.