

**TALKING POINTS FOR DISCUSSION
HARVARD ELECTRICITY POLICY GROUP
MILWAUKEE, WISCONSIN – NOVEMBER 20, 1998
BY STEPHEN ANGLE**

The current debate regarding the restructuring of the electric industry is now focused on the appropriate structures that a regional grid operator may take: an independent system operator (ISO), an independent transmission company (ITC), or both. The purpose of this discussion is (1) to review the advantages of an ITC in the transition to a system of regional grid operators, and (2) to comment on the various issues that ITCs will have to address before the Federal Energy Regulatory Commission (Commission) considers an ITC as a viable regional grid operator.

**THE ADVANTAGES OF AN ITC IN THE TRANSITION TO A SYSTEM
OF REGIONAL GRID OPERATORS**

➤ **INCENTIVE TO ESTABLISH A SINGLE CONTROL AREA**

All of the ISOs to date, with the exception of the Midwest ISO, have been established in those areas where there was a pre-existing tight power pool (PJM, New England, and New York) and where there was a state mandate to establish a regional transmission provider (California and Texas). There is evidence, however, that existing utilities in those areas without a history of integrated operations and without a state mandate are reluctant to make the substantial investment that is necessary to establish an ISO with a single control area operator.¹ Not all utilities would benefit directly from the formation of a single control area and these utilities may therefore be reluctant to voluntarily incur such startup costs.²

The Commission has demonstrated that it is willing to promote ISO formation (*e.g.*, by strongly encouraging ISO participation in merger cases as a means of resolving certain types

¹ See generally the discussion on the Desert STAR and INDEGO proposals in Transcript from Phoenix, AZ ISO Conf., F.E.R.C. Docket No. PL98-5-000 (May 28, 1998), and Transcript from Portland, OR ISO Conf., F.E.R.C. Docket No. PL98-5-000 (June 5, 1998).

² The startup costs for an ISO that does not have a history of integrated operations can be substantial. The startup costs for the California ISO are approximately \$301,000,000. This amount includes the Infrastructure Budget, the costs related to the delay in the startup of the ISO, the 1998 and 1999 capital expenditure budgets, the first quarter working capital, and the capitalized interest requirement. See "Financing Plan Completion" on the California ISO's website, www.caiso.com, under Board Information, Public Notices, Finance Committee, dated May 22, 1998. These costs do not include the startup costs of approximately \$100,000,000 incurred by the California PX. See Filing by California PX, F.E.R.C. Docket Nos. ER98-210-000 and ER98-1729-000, filed on January 30, 1998. By contrast, the startup costs for the ISO New England, which has a history of integrated operations, was approximately \$40,000,000. See "Answer of NEPOOL Executive Committee to Motion of ISO New England Inc. Regarding Market Assessment and Market Implementation, at 3, filed in *New England Power Pool*, F.E.R.C. Docket Nos. OA97-237-000, *et al.*, filed on October 13, 1998.

of market power concerns).³ However, as demonstrated by the structure of the recently approved Midwest ISO, which does not create a single control area to manage its transmission grid, even utilities that have been encouraged by FERC to join an ISO are still reluctant to incur the costs necessary to integrate their operations.⁴ The result of this reluctance will be the development of regional entities, such as the Midwest ISO, that are unable to combine the control areas of the individual utilities into a single control area, and are therefore unable to internalize loop flows or take advantage of the operating efficiencies associated with a single control area covering a large geographic region. In addition, there is a concern that integrated utilities have strategic reasons for posting available transmission capacity (ATC) data that is less than high quality⁵ and that the lack of a single control area will significantly impair the ISO's ability to impartially calculate the ATC on its grid.

Because an ITC can increase its profits by increasing its efficiency, it will have an inherent business incentive to take advantage of the economies of scale by expanding its control area. Unlike an ISO, a utility will have an incentive to invest its capital in an ITC to increase the return for its shareholders. The Commission should therefore encourage the development of such for-profit business units that have the incentive to increase operational efficiency through the expansion of their control areas.

➤ **COMPLETES THE SEPARATION OF TRANSMISSION AND GENERATION**

Order No. 888 requires utilities (1) to offer comparable open access transmission service for wholesale transactions under a tariff of general applicability and (2) to take transmission service for their own wholesale sales and purchases under this open access tariff.⁶ Order No. 888's companion order, Order No. 889, required utilities to give transmission users the same access to transmission information that the utility enjoys.⁷

³ See, e.g., *Ohio Edison Co.*, 81 F.E.R.C. ¶ 61,110 (1997); *Louisville Gas & Elec.*, 82 F.E.R.C. ¶ 61,308 (1998).

⁴ *Order Conditionally Authorizing Establishment of Midwest Independent System Operator and Establishing Hearing Procedures*, 84 F.E.R.C. ¶ 61,251 (1998).

⁵ See *Petition for a Rulemaking on Electric Power Industry Structure and Commercial Practices and Motion to Clarify on Reconsideration Certain Open-Access Commercial Practices*, F.E.R.C. Docket No. RM98-5-000, filed on March 25, 1998.

⁶ See *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Service by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Final Rule, Order No. 888, 61 Fed. Reg. 21,540 (May 10, 1996), [1991-1996 Transfer Binder] F.E.R.C. Stats. & Regs., Regs. Preambles ¶ 31,036 (1996), *order on reh'g*, Order No. 888-A, 62 Fed. Reg. 12,274, III F.E.R.C. Stats. & Regs., Regs. Preambles ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 F.E.R.C. ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 F.E.R.C. ¶ 61,046 (1998). Order No. 888 at 31,635-36 (Order No. 888).

⁷ See *Open Access Same-Time Information System (Formerly Real-Time Information Network) and Standards of Conduct*, Order No. 889, [1991-1996 Transfer Binder] F.E.R.C. Stats. & Regs., Regs. Preambles ¶ 31,035, at 31,585 (1996), *order on reh'g*, Order No. 889-A, III F.E.R.C. Stats. & Regs., Regs. Preambles ¶ 31,049, *reh'g denied*, Order No. 889-B, F.E.R.C. Stats. & Regs., Regs. Preambles ¶ 61,253 (1997).

An integrated utility's interest in participating in a regional transmission entity, either through a for-profit ITC or a nonprofit ISO, is a direct result of these open access requirements under which the utility is no longer allowed to use its transmission assets to insulate its generation from competition. Even under Order Nos. 888 and 889, however, transmission facilities continue to add some "strategic" value to an integrated utility's upstream generation assets.⁸ Despite the Commission's functional unbundling requirements, utilities are still able to manipulate their transmission facilities and the access to transmission information to the advantage of their own generation.⁹

In an ISO structure, a utility retains ownership of its transmission facilities. Therefore, when the ISO is not the control area operator (such as the case with the Midwest ISO) the utility still has an incentive to manipulate its ATC to the benefit of its own generation. By contrast, an integrated utility's divestiture or long term lease of its transmission assets to an ITC completely separates the historic linkage of the utility's generation and transmission functions.

➤ **LINKS OPERATION AND OWNERSHIP OF TRANSMISSION**

Both the ownership and the operation of transmission facilities are unified in an ITC structure. Because an ITC both owns and operates the facilities, it has a greater incentive to improve efficiency and reliability in the provision of transmission services than does a transmission provider that is only responsible for the short term operation of the facilities. An ITC will be able to increase its return by operating its transmission system efficiently, by maximizing the usage across its system, and by investing in its system to increase long term efficiency.

Even in those instances in which a utility transfers its transmission assets to an ITC under a long term lease rather than by divestiture, the lease arrangement would be structured so that the ITC would not only operate the transmission facilities, but would also have all of the risks and rewards associated with ownership. For example, the ITC would be allowed to make capital improvements on the leased facilities and to realize profits from the use of such facilities. These attributes of ownership are designed to ensure that, even in those ITC structures that are established on the basis of long term lease arrangements instead of on the outright ownership of the transmission facilities, the ITC nonetheless has the incentives associated with ownership.

⁸ This continued ability to use transmission assets strategically stems from Order No. 888's failure to require a public utility to serve its own bundled retail load under its open access tariff. Order No. 888 at 31,745.

⁹ See, e.g., *Morgen Stanley Capital Group v. Illinois Power*, 83 F.E.R.C. ¶ 61,204 (1998), modified, 83 F.E.R.C. ¶ 61,299 (1998); *Wisconsin Pub. Power Inc. v. Wisconsin Pub. Serv. Corp.*, 83 F.E.R.C. ¶ 61,198 (1998), modified, 84 F.E.R.C. ¶ 61120 (1998).

➤ **SUFFICIENT CAPITAL**

As an investor owned transmission entity, an ITC will be able to more readily attract capital than a regional transmission entity, such as an ISO, that only operates but does not own the transmission facilities and that is run on a not-for-profit basis. As the owner of transmission assets and the operator of a profit-generating enterprise, an ITC may both issue debt secured by its assets and attract equity investors. The relative ease with which an ITC will be able to attract capital makes the ITC a better risk for raising additional capital for system improvements and expansion. Because an ITC will represent a better risk for investors, loans to an ITC will not require government guarantees or guarantees by the investor owned utilities whose transmission assets will form the ITC's grid.

➤ **INCENTIVE TO INVEST CAPITAL**

Because an integrated utility may no longer be able to manage its transmission assets strategically to protect its generation business from competition, the utility will have a reduced incentive to invest capital in its transmission facilities as part of its integrated operations. The utility may conclude that its transmission assets are not large enough to provide a sufficient investment base from which to generate a desirable return. In addition, the utility may be faced with the significant costs associated with the operational separation of its generation and transmission facilities and employees, as mandated by the Commission in Order Nos. 888 and 889. The utility may therefore view the divestiture or long term lease of its assets to an ITC as a more attractive investment opportunity than the continuing operation of those assets within its vertically integrated structure.

Investors will also recognize that an ITC represents a worthwhile investment because the combination of the transmission assets of various entities will increase the ITC's operating efficiency thereby leading to an increase in the ITC's profits. Moreover, the Commission, by indicating to investors that they can retain a significant portion of the savings achieved by the ITC through an incentive based rate mechanism, will further encourage the ITC to pursue additional business opportunities.

An integrated utility's continued ability to manage its transmission assets to the benefit of its generation stems from the fact that the Commission exempts from its non-discriminatory open access requirements the utility's use of its transmission system to serve its own bundled retail load.¹⁰ However, it is highly likely that the Commission will respond to a groundswell of opposition to this policy, eliminate this exemption, and require the utility to serve its own retail load under its open access tariff.¹¹ Once this exemption is removed and transmission

¹⁰ Order No. 888 at 31,745.

¹¹ In Order No. 888, the Commission expressly noted the interrelationship between the capacity reserved for a utility's bundled retail customers and the capacity available for the utility's wholesale customers. The Commission stated that "the amount of transmission capacity available to wholesale and unbundled retail customers under the Final Rule pro forma tariff is clearly affected by the amount of transmission capacity that the transmission provider reserves for the use of its native load customers and the future load growth of those customers." Order No. 888 at

has no more use as a strategic asset, the utility will have even a stronger economic incentive to conclude that its transmission assets no longer represent the soundest use of its investment capital. Once the utility is forced to serve its retail load the same as it serves its other transmission customers, a spin-off or long term lease of its transmission assets is likely to be the most attractive economic alternative for the utility.

➤ **INCENTIVE TO SEEK OUT EFFICIENCIES**

Because the ITC will be a for-profit company that combines the attributes of ownership of transmission facilities with the operation of those facilities, the ITC will necessarily have a greater incentive to improve efficiency and reliability in the provision of transmission services than does a not-for-profit ISO. The managerial incentives feasible in a for-profit enterprise are larger and more flexible than those that can be implemented in a nonprofit structure. In addition, an ITC will have an inherent incentive to take advantage of the economies of scale and combine smaller assets to realize additional operating efficiencies. The Commission should expect that these economic incentives inherent in a for-profit enterprise are the best way to realize efficiency in operations. The Commission can assume that a portion of this efficiency will be passed along to ratepayers in the form of lower rates.

➤ **INCENTIVE TO CONSTRUCT NEW FACILITIES**

As noted above, both the ownership and operation of the transmission facilities are joined in an ITC. Therefore, an ITC's decision as to whether to undertake the construction of new facilities or upgrade existing facilities will be based on a careful cost-benefit analysis. By contrast, an ISO, which does not own the transmission facilities it operates, is limited to coordinating and calling for investment in new facilities and is reliant on the owners of the transmission facilities to obtain regulatory approval and complete construction. While an ISO is also responsible for determining which upgrades are needed, an ISO lacks the profit motivation that a properly-formulated ITC would have to conduct a cost/benefit analysis regarding such construction.

31,745. Since the issuance of Order No. 888, numerous complaints have been brought to the Commission alleging that a utility has incorrectly calculated its ATC to benefit its own load at the expense of its wholesale customers. See footnote 9.

ISSUES TO BE ADDRESSED BY ITCs BEFORE THE COMMISSION WILL ACCEPT AN ITC AS A REASONABLE ALTERNATIVE TO AN ISO

➤ **CONGESTION MANAGEMENT AND PRICING**

In reviewing proposals for regional transmission providers, the Commission will demand an effective set of congestion management and pricing rules that will ensure that existing generation is used efficiently, that new generation is sited on the basis of accurate price signals, and that the transmission owner has the appropriate incentives to expand the transmission system as needed. These rules should provide a balance between creating certainty in congestion pricing while providing accurate signals to create efficiency and accuracy in pricing. An ITC should be able to devise a reasonable program for fixing congestion management costs in advance in exchange for the right to retain some portion of any efficiencies it can achieve in congestion management.

In addition, an ITC as a monopoly owner of the transmission system will be required to demonstrate to the Commission that it will not be able to unduly profit from an ability to collect from its customers congestion costs in excess of the actual costs of relieving congestion. The ITC's congestion management and pricing rules should not be left totally to the discretion of the ITC but rather should be subject to appropriate regulatory oversight.

It should be noted that the Commission may accept a number of congestion management and pricing plans for an ITC, including locational marginal pricing.

➤ **ANCILLARY SERVICE MARKETS**

Because an ITC is a transmission provider, it will be required under Order No. 888 to provide ancillary services to its transmission customers.¹² Under Order No. 888, transmission users may self-provide some of these services.¹³ However, economies of scale make it probable that most ancillary services will be more efficiently provided through a centralized entity, such as through the ITC. Recent events in the market for ancillary services in California suggest that the Commission will pay particular attention to whether the ITC has set up ancillary service markets that are workably competitive.¹⁴

In order to ensure sufficient suppliers and competition in prices, the Commission has determined that it will allow market-based rates for ancillary services. In order to prevent market power abuses by ancillary services providers, the Commission may permit the ITC to impose price caps on the amount it pays for ancillary services. However, the Commission

¹² Order No. 888 at 31,703-704.

¹³ *Id.*

¹⁴ *AES Redondo Beach, LLC, et al.*, 84 F.E.R.C. ¶ ____ (October 28, 1998).

will allow the use of such caps only as a temporary measure until any structural problems in the ancillary services market can be corrected.

➤ **POWER MARKETS**

Once a set of transmission assets has been divorced from the integrated utility and transferred to an ITC, the ITC has an obligation to procure capacity and related energy for ancillary services for its customers. An ITC therefore has an interest in the development of an efficient power market. Liquidity and transparency in a power market will allow the ITC to determine its costs for capacity and energy for ancillary services in advance. Liquidity in trading also results in a decrease in prices, permits the correct pricing signals for system investment, and provides overall stability in a competitive electric market.

However, there is no reason why an energy market must be established as part of an ITC's structure. Many market participants (both marketers and generators) would be suspicious of an entity that is involved in both the transmission and generation businesses.¹⁵ While an ITC can benefit from liquidity in the market, the Commission may need to recognize that the policies associated with the creation of a workably competitive power market are separate from those policies associated with the development of an ITC. Instead of creating an ITC that is involved in the energy market, the Commission should be concerned with developing independent transmission entities and power markets on parallel, but separate, tracks.

➤ **RELIABILITY**

An ITC, as a for-profit entity, has an inherent business incentive to provide its customers with reliable transmission service. However, critics may argue that, under an incentive based pricing mechanism, an ITC may have the incentive to sacrifice reliability in order to increase its profits. The ITC may have an added incentive to further reduce reliability margins if its ancillary service costs are fixed rather than passed through to its customers. In order to counter these criticisms, an ITC must come forward with a workable program to coordinate its implementation of reliability criteria with its Regional Reliability Council. The Reliability Council will be responsible for developing reliability standards that are applicable to an ITC.

➤ **INVESTMENT IN FACILITIES**

Adding new transmission facilities or upgrading existing facilities may be the most efficient solution for solving a certain reliability problem or transmission constraint on an ITC's system. However, for other constraints or problems a generation solution, such as the construction of new capacity or the employment of must-run units, or load-based solutions, such as demand-side management or interruptible service, may indeed be more appropriate. There is some concern that an ITC, which will own and operate the transmission system but

¹⁵ In California, the marketers and large industrial customers were adamant that the ISO and the PX be established as separate entities.

will not be affiliated with any generation, will bias its reliability/constraint decisions towards a transmission solution over a more efficient generation or load-based solution.

An ITC will need to demonstrate to the Commission that this bias toward transmission solutions is mitigated by the fact that an ITC must first convince local authorities that any proposed new construction is necessary. Local siting and environmental concerns may also restrict the addition of new transmission facilities. Moreover, a potential generation investor will have an economic incentive to construct new generation within the constrained regions of the ITC's system. Because Section 211 of the Federal Power Act will require an ITC to interconnect with that generator and Order No. 888 will require the ITC to provide transmission service to that generator under its open access tariff, the ITC will be precluded from biasing its investment decisions toward transmission solutions.

➤ **REGIONAL TRANSMISSION GROUPS**

While an ITC will be responsible for making system additions, a Regional Transmission Group (RTG) or other outside entity engaged in transmission planning should be responsible for assessing the need for such additions. This outside entity will serve as an additional safeguard to ensure that an ITC does not construct any unnecessary facilities. An ITC will need to address the nature of its relationship with this outside planning entity, including how to trade information with the entity, how to identify the needs of the ITC's transmission system, and how to identify the options to satisfy those needs.

➤ **JOINT TARIFF**

There is a general expectation that regional transmission entities should cover a large geographic area.¹⁶ Because ITC formation requires a different financial commitment than the commitment required for the startup of an ISO, an ITC's initial area of coverage may be smaller than that of the ISOs established to date. An ITC should therefore be willing to develop a joint tariff with its neighboring regional transmission entities, both ITCs and ISOs, to address the issue of rate pancaking on a regional basis. In addition, because an ITC will establish a single control area, it should explore the various means to coordinate scheduling with its neighboring ISOs and ITCs. One such method is for the ITC to act as Tariff Administrator for other control areas within its region. While such coordination may not create a single control area consisting of the ITC and its neighboring regional transmission providers, it will provide certain benefits of merged operations, thereby furthering the Commission's goal of eliminating rate pancaking and facilitating the development of a single control area for that region.

¹⁶ ISO Principle 3. Order No. 888 at 31,731.

➤ **RIGHT OF EMINENT DOMAIN**

An ITC will need to address how it will deal with the question of eminent domain once there has been a complete separation of the transmission assets from the integrated utility. An ITC must ensure that it retains the right of eminent domain that was previously enjoyed by the integrated utility whose transmission assets it has either acquired or is operating. While an ITC would also benefit from having the right of eminent domain at a federal level, this issue can only be addressed, and in fact should be addressed, by federal legislation.