UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Inquiry Concerning
Alternative Power Pooling Institutions
Under the Federal Power Act

Docket No. RM94-20-000

COMMENTS OF THE U.S. DEPARTMENT OF JUSTICE
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These comments are filed by the U.S. Department of Justice (Department) in response to the notice of Inquiry Concerning Alternative Power Pooling Institutions under the Federal Power Act (Notice), published by the Federal Energy Regulatory Commission (Commission), 59 Fed. Reg. 54,851.

The Notice poses general questions about the desirability and role of "alternative power pooling institutions." One such institution of particular interest is the "PoolCo," which several California utilities have proposed in connection with sweeping reform proposals in that state. A PoolCo is similar to some traditional pools in that it coordinates among utilities, but it is fundamentally different in that it represents a market mechanism for allocating resources on the basis of price signals. A PoolCo is an entity that makes a real-time spot market in electric power, operates the transmission system and dispatches the generating plants to accomplish the voluntary purchases and sales made in its spot market, and does this independently of any generator or owner of transmission.

Executive Summary

The Department believes that a PoolCo could be a excellent mechanism for helping to complete the transformation of the electric power generation industry from the series of regulated monopolies it once was into a series of interconnected, openly competitive, and effectively unregulated markets. Competitive markets for electric power generation would efficiently operate generating plants and efficiently price power without costly regulation, which necessarily imposes some degree of inefficiency on the industry.
Whether a PoolCo can achieve such benefits depends on several factors including the details of the particular PoolCo proposal and related transmission planning and pricing, and the competitiveness of the resulting generation market.

A PoolCo can be an important tool in transforming the electric power industry because it addresses problems created by vertical integration. The U.S. electric power industry consists overwhelmingly of utilities that are integrated from power generation through to retail service. While there may be important efficiency benefits of vertical integration, there may also be significant competitive and efficiency costs. By controlling access to transmission facilities, utilities can eliminate or distort competition that otherwise might exist in generation. A PoolCo presents potentially effective solution. The problems of vertical integration could, in principle, be eliminated by having utilities cede control of their transmission system and the dispatch of their plants to a PoolCo.

A PoolCo would also facilitate the emergence of financial markets that improve the efficiency of resource allocation. It would do so by clearly separating transactions involving real power flows, which would be done (largely if not exclusively) through the PoolCo, from transactions designed to allocate risk or lock in future prices, which would be accomplished through purely financial instruments.

The Commission should encourage the formation of PoolCos by issuing a policy statement establishing guidelines for determining whether a PoolCo agreement is just and reasonable under the Federal Power Act. The policy statement should set forth any particular characteristics that the Commission determines must be met, but otherwise should not be prescriptive. The PoolCo concept should be allowed to develop through private negotiation and public experimentation.

Because a PoolCo is a market mechanism for setting prices and allocating resources, it is incompatible with traditional rate regulation for generation. The Commission’s policy statement should make clear both that it will permit unfettered market-based pricing within the context of any approved PoolCo and that it will not approve a PoolCo unless the degree of competition will be sufficient to reasonably assure that the benefits of removing regulatory constraints exceed the costs.

Under a PoolCo, transmission prices will play an important role in allocating resources. Transmission prices will be an important factor in determining the locations of new loads and new generating capacity, and in providing incentives for new
additions to transmission capacity. In determining whether to approve a PoolCo, the Commission should consider whether the related transmission pricing can be relied upon to allocate resources efficiently.

Discussion

The PoolCo Concept

The Notice seeks comments on the basic idea of a PoolCo, rather than on any specific PoolCo proposal, and indeed, there do not appear to be any fully developed proposals at the moment. It is often said that "the devil is in the details," and a PoolCo certainly could be structured inefficiently and anticompetitively. Moreover, it is difficult to assess the compatibility of a PoolCo with other desirable market institutions without detailed knowledge of its operation. Although the Department does not mean to suggest that other alternative power pooling institutions should be discouraged, these comments are limited to PoolCos that would operate as follows:

A PoolCo would operate essentially in real time, with a separate price set for each hour or half hour. Owing to constraints in the transmission network there could be several, even many, different market-clearing prices at different points within a PoolCo. For each hour or half hour, sellers participating in a PoolCo would submit offers, each consisting of a price, an amount of power, and a generating plant that would produce it. The PoolCo would collect these offers and accept offers in order, beginning with the lowest bid price and continuing to the next-lowest and so on, until the accepted offers are sufficient to satisfy the demand. The highest-price offer accepted establishes the market-clearing price, which would be paid for all power sold through the PoolCo.

A PoolCo would also control the dispatch, or actual operation, of the generating plants. Dispatch would be in price-merit order, with plants operated in order of their bids. To some extent, dispatch will differ from offer acceptances, due to differences in actual demand from that forecast, and due to plants not yielding precisely the power they offered. Buyers would actually pay, and sellers would actually be paid, through a settlements process, operating after the fact on the basis of actual system operation.

All interested buyers and sellers would be permitted to participate in PoolCo on an equal basis. All buyers and sellers would have equal access to the transmission system, which would be operated by the PoolCo (or by a separate "WireCo"). Sellers into the pool, buyers from it, or both would be separately billed for their use of the transmission
system. PoolCo (or WireCo) would provide necessary reserves and system balancing required for the reliable operation of the system.

While a PoolCo would dispatch generation plants and possibly operate the transmission system, it would own neither. The physical assets of a PoolCo could be little more than a computer, although its program might be highly sophisticated, since dispatch would have to account for all transmission and any other engineering constraints on the system. A PoolCo could be owned by any number of possible entities, including utilities and government agencies, but would be operated independently of any buyer or seller of either power or transmission.

Much like any number of other market mechanisms in the U.S. economy, a PoolCo matches competitive supply with demand. In some respects, however, a PoolCo is, and must be, unique. In the electric power industry, the product is consumed at essentially the same instant that it is produced. If market forces are to be permitted to allocate generating resources in real time, there must be some direct linkage between the market institution that makes prices and matches buyers and sellers, on the one hand, and the dispatch function on the other. PoolCo provides the needed linkage. Such a linkage simply is not needed in most other industries because they do not operate in real time.

Potential Benefits of PoolCos

The overarching question with respect to PoolCos is how they fit into the future of the electric power industry. The answer to this question depends, of course, on one's vision of the future of the industry. PoolCo proposals are emerging in California in response to plans by the California Public Utilities Commission to eliminate retail electric service as we have known it, and replace it with door-to-door competition among generators. Other visions of the future of the industry also involve greater competition among generators, and much greater reliance on market forces to set prices and dispatch the system.

The PoolCo concept has the potential to play a useful role in all of these visions. By effectively divorcing from electric utilities the dispatch function and control over their transmission systems, a PoolCo can remove major obstacles to the emergence of a competitive market for generation created by the vertically integrated structure of the electric power industry.
The electric power industry in the United States consists overwhelmingly of utilities that are integrated from power generation through to retail service. This vertical integration provides a means for coordinating the construction and operation of generation, transmission, and distribution facilities. Vertical integration, thus, undoubtedly produces some efficiencies, but it may also impose competitive and efficiency costs. Transmission systems exhibit significant natural monopoly elements, and in any event, utilities commonly have substantial market power in transmission. By controlling access to transmission facilities, utilities can eliminate or distort competition that otherwise might exist in generation.

Access to transmission facilities can be mandated, but that would not eliminate the incentive or ability to distort competition. Mandated access, therefore, would require constant regulatory monitoring and entail significant costs. The potential for distorting competition could, of course, be eliminated by forcing utilities to divest their generation, but a PoolCo presents a less extreme, but potentially equally effective alternative. Utilities would cede control of their transmission systems and the dispatch of their plants to the PoolCo. At least in principle, this would eliminate the problems of vertical integration without significant loss of any current benefits, and it would do so without the costs and delays inherently associated with massive divestitures.

A central aspect of some visions of industry's future is the effective elimination of federal, and possibly state, regulation of generation. State and federal regulation of utilities, qualifying facilities, and independent power producers distorts the competitive process by preventing the use of market-clearing prices and by creating various competitive handicaps and advantages. With efficient transmission pricing, sufficient competition, and proper operational safeguards, PoolCo price signals could allocate resources far more efficiently than is the case today. Likely consequences would be lower average prices and peak demand, and less need for expensive additions of generating and transmission capacity.

Retail rate reform is not one of the Commission's direct concerns, but the Commission should consider how a PoolCo could facilitate state retail regulatory reform. If retail customers continue to buy from utilities with traditional service obligations, retail rates can be set equal to the PoolCo price (plus additional charges) to yield efficient, real-time price signals. If retail customers are to be permitted to participate directly in the market, the PoolCo price can be the price they pay (plus
additional charges) in the absence of any other contractual arrangements.¹

Factors that Should Be Considered by the Commission Before Approving a PoolCo

In the Department’s view, the purpose of a PoolCo is to facilitate the increased reliance on market mechanisms to allocate resources in the electric power industry. Superimposing a PoolCo on traditional wholesale rate regulation would defeat this purpose. It likely would achieve few benefits but would introduce new distortions into the market. Thus, in considering its general policy toward PoolCos and specific PoolCo proposals, the Commission should consider the extent to which it is willing and legally able to forbear from traditional wholesale ratemaking.

Apart from any legal constraints of the Federal Power Act, the Commission should not lightly approve a proposed PoolCo and abandon its traditional regulatory role. The existence of a PoolCo cannot guarantee competitive pricing, since there may be only a small number of significant sellers into, or buyers from, the pool. The Commission should not approve a PoolCo unless it finds that the level of competition in the relevant generation markets would be sufficient to reasonably assure that the benefits of eliminating traditional rate regulation exceed the costs.

In the absence of a specific proposal and considerable study, the Department is not prepared to offer an opinion on whether competition is adequate in any particular situation. Several general points can be made, however, about the level of competition that FERC should find sufficient. First, the available economic literature suggests that the number of sellers does not have to be large in order to achieve virtually all the benefits of competition. See Richard J. Green and David M. Newbery, Competition in the British Electricity Spot Market, 100 JOURNAL OF POLITICAL ECONOMY 929 (1992). Second, the potential benefits of using markets rather than regulation to allocate

¹ A backstop such as this may be essential for two reasons. First, the transactions costs of supply contracts with individual customers would be significant, and there must be a way of avoiding such costs for sufficiently small consumers. Allowing customers to simply take from, and be billed by, PoolCo suits this purpose. Second, even in the absence of significant transaction costs, there must be a mechanism for dealing with instantaneous demand for which prior contractual arrangements have not been made. Traditional utilities could perform such functions, of course, but a state may prefer to limit retail regulation by eliminating traditional utility service.
resources are great, so market-based pricing should be preferred to regulation unless the relevant generation markets are sufficiently concentrated that performance is likely to deviate substantially from that under perfect competition. Third, in a variety of ways, PoolCos are likely to facilitate entry over time, which may significantly increase the level of competition.

Furthermore, if the initial level of competition is insufficient to warrant total effective deregulation of generation, the Commission should recognize that there are ways of addressing the problem other than continued reliance on traditional cost-of-service regulation or any form of average-cost pricing. One way to mitigate market power would be to require that rights to some existing generating capacity be auctioned off in logical, efficient units. Another way would be to require that power from some of the generating capacity be bid into the pool at a price equal to the incremental cost of operating that capacity.

A PoolCo raises antitrust issues, because it is a joint venture among competitors and it relates to market price and quantity. However, the Department does not believe that participation in a PoolCo will subject anyone to antitrust liability, provided that the PoolCo achieves the open market competition that the Department understands to be central to the concept of a PoolCo.

A PoolCo might be susceptible to manipulation through self-dealing in transmission and dispatch if it is owned and operated by sellers, particularly if it is owned and operated by a small group of sellers. Whether substantial or not, it may be desirable to address this concern by requiring a PoolCo to be owned and operated by an independent firm, by all sellers collectively, by all buyers collectively, or by a state government. Restrictions on ownership should pose no problems for the efficient operation of a PoolCo. However, unresolved issues remain as to which ownership structure best promotes efficient investment in transmission resources.

The Commission should evaluate a PoolCo proposal in the context of a detailed transmission pricing plan. With greater use of market forces to allocate resources, transmission prices will have substantial effects on the efficiency of resource allocation. It is essential to consider whether transmission price signals provide proper incentives for investments in major new transmission projects and debottlenecking the transmission system. Thus, the Commission should consider this incentive issue in the context of particular PoolCo proposals. In addition, the Commission should consider whether
inefficient transmission pricing could undermine the efficiency of the price merit-order dispatch, which is at the heart of the PoolCo concept. That could occur if marginal transmission prices failed to reflect constraints on the system.²

Separating Financial Transactions from those Involving Real Power Flows

A PoolCo is an appealing solution to the particular problems of resource allocation in the electric power industry. The task of the electric power industry is to satisfy demands for power. This is done by assuring that generating plants produce whatever power is demanded, do so the instant that the power is demanded, and do this subject to a host of complex engineering constraints. Within an electric power system, power flows according to basis laws of physics, following the path of least resistance. Getting more power from the Pacific Northwest to Southern California, for example, may entail bringing it through Nevada or Colorado. Moreover, such a transfer may cause changes in the operation of numerous generating plants in between.

In a very real sense, power can only be supplied into the grid and taken from it; anything more specific about who is selling to whom is largely a matter of accounting convention. Bilateral contracts specifying the sale and delivery of power literally do so only in an accounting sense, and they typically ignore very real effects on nonparties to the transaction. The PoolCo concept abandons the current fiction perpetrated by bilateral contracts by having buyers and sellers deal with the pool rather than each other and by dispatching plants in an economical fashion, independently of the constellation of contractual arrangements for the purchase, sale, and transmission of power.

If there is sufficient competition among generators, real-time competition in generation will yield both the efficient dispatch of the plants and market-clearing prices

² PoolCo proposals differ with respect to the pricing of transmission. One possibility is to have real-time, congestion pricing for transmission. Another is to use some variation on the current regime. It is not clear that either approach provides the proper incentives for new transmission investments. The former may not yield sufficient revenue to cover total costs over the long run, unless supplemented by some sort of fixed charges for users. The latter may send inefficient resource allocation signals, since regulated transmission prices are based primarily on average embedded cost, which may differ dramatically from both short-run or long-run marginal cost and does not reflect transmission constraints.
that send proper resource allocation signals to consumers. To the extent that the PoolCo dispatch differs from that under current or alternative future market institutions, the PoolCo dispatch should entail lower total social costs for generation, provided that the PoolCo dispatch algorithm lives up to its theoretical promise.

A PoolCo is entirely compatible with any purely financial contract conceivable. Indeed, a PoolCo should actually facilitate the development of numerous innovative and efficient contracting modes because it permits firms not engaged in generation or distribution to participate fully in the market; it eliminates transmission access as a potential bottleneck; and it should eliminate burdensome traditional regulatory oversight by creating a bright line between (jurisdictional) real power flow transactions and what would, under PoolCo, be seen as (nonjurisdictional) purely financial transactions.

One example of the sort of financial transaction facilitated by a PoolCo would be the provision of "conservation services" by entities not associated with electric generators or distributors. Such entities could purchase rights to outputs of generators and rights to interrupt customers' service when price rose to a certain level. The conservation services company would then profit by collecting the PoolCo price for the contracted generation when the price rose above the contract level. It would also be possible for consumers to cut out the middleman. They could themselves purchase rights to outputs of generators and simply not use some or all of the energy when the spot price is high.

Some Misunderstandings about PoolCos

It has been suggested that a single PoolCo would be a monopoly buyer and seller, and therefore would undermine emerging competition. This suggestion is based on a fundamental misconception of the nature of the PoolCo. PoolCo should not be thought of as a buyer or seller at all, even if it acts that way as a technical, legal matter. As the Department understands the concept, a PoolCo acts entirely passively, according to its programmed instructions, and for any given increment of time, the price paid to sellers into the pool must equal the price paid by buyers from the pool. Thus, PoolCo is a market, and not a market participant. It acts much like (although not precisely like) the Chicago Board of Trade and the New York Stock Exchange. The less well known Vancouver Stock Exchange and especially the Arizona Stock Exchange are quite similar, since they are electronic markets conducted through computers. The Arizona
Stock Exchange is most like a PoolCo because it does not operates continuously, but rather the market clears at a prespecified time and trades are then made.

PoolCo opponents have charged that the effect of PoolCo would be to thwart the development of efficient, innovative, bilateral contracts to hedge risks and more efficiently allocate resources. The Department sees no basis for this concern, which appears to stem from a fundamental misconception about the role of PoolCo and its compatibility with other trading regimes. PoolCo is intended to dispatch plants, but not to supersede any sort of long- or short-term bilateral contracting.

There has been much consternation about participation in a PoolCo being mandatory. The Department sees no reason why a PoolCo needs to be mandatory, although its essential functions may require that a substantial portion of the industry participate. Buyers and sellers that want to contract to operate plants out of merit dispatch order could be free to do so, provided that they schedule the plants with the PoolCo. Why anyone would find doing so beneficial is more difficult to determine.³

The question of competing PoolCos or other similar institutions within the same area seems not to have been raised, but it is a natural one. Having competing PoolCos appears to be theoretically possible, but undesirable. Having multiple PoolCos would lead to inefficient dispatch, since competing PoolCos would yield multiple market-clearing prices for a particular location at a particular time. A plant offering to sell in one PoolCo at a price lower than the market-clearing prices in other PoolCos may not be dispatched. Having multiple PoolCos could significantly increase the potential for the exercise of significant market power, since average concentration would tend to be higher with multiple PoolCos.⁴

³ A generator wanting to ensure that its plant would be dispatched could just bid a price of zero. This strategy entails no particular risk to the generator, since it would be paid the market-clearing price. A customer that wanted to "purchase" from a particular generator, could enter into a contract with that generator requiring it to bid zero for the amount of energy desired to be "purchased." Even if the PoolCo dispatch algorithm somehow went wrong, such financial contracts should be able to greatly mitigate the problems.

⁴ Having multiple PoolCos would be totally infeasible if current retail customers were permitted to buy directly from the PoolCo, as is contemplated in California because there is no practical way in which to direct particular consumers' loads to particular PoolCos in real time.
Conclusion

A PoolCo provides a useful market mechanism to determine prices for electric power generation. The Commission should encourage the formation of PoolCos wherever the level of competition in the relevant generation market would be sufficient to reasonably assure that the benefits of eliminating traditional rate regulation exceed the costs. The Commission should also issue a policy statement outlining basic conditions PoolCos must satisfy to provide the free and open competition they are intended to provide.

Respectfully submitted,

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