Before the FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company)
)
Complainant,)
V.)
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Sellers of Energy and Ancillary Services)
Into Markets Operated by the California)
Independent System Operator and the)
California Power Exchange)
)
Respondents.)

Docket Nos. EL00-95-000 et al.

Comment of the Staff of the Bureau of Economics and of Policy Planning of the Federal Trade Commission¹

November 22, 2000

^{*} This comment represents the views of the staff of the Bureau of Economics and of Policy Planning of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner.

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I. INTRODUCTION AND SUMMARY

The staff of the Bureau of Economics and of Policy Planning of the Federal Trade Commission (FTC) submits this comment to the Federal Energy Regulatory Commission (FERC) on its Order Proposing Remedies for California Wholesale Electric Markets (Proposed Order) in the above-captioned proceeding. The Proposed Order is intended to remedy deficiencies in market rules and institutions that have contributed to recent reliability difficulties and high prices for electric power in California.

The FTC is an independent administrative agency responsible for maintaining competition and safeguarding the interests of consumers. The staff of the FTC often analyzes regulatory or

¹ This comment represents the views of the staff of the Bureau of Economics and of Policy Planning of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner. Inquiries regarding this comment should be directed to John C. Hilke (303-844-3565 or jhilke@ftc.gov).

legislative proposals that may affect competition or the efficiency of the economy.² In the course of this work, as well as in antitrust research, investigation, and litigation, the staff applies established principles and recent developments in economic theory and empirical analysis to competition issues.

The FTC has a longstanding interest in regulation and competition in energy markets, including proposals to reform regulation of the electric power and natural gas industries. The staff has submitted numerous comments concerning these issues at both the federal and state levels,³ and the FTC has reviewed proposed mergers involving electric power and natural gas utility companies.

The circumstances in California to which FERC is responding have been extraordinary. As explained in the Proposed Order, the markets in California have reached a point where FERC, in carrying out its responsibilities under the Federal Power Act, is obligated to correct certain defects in wholesale electric power markets.⁴ Although states have an important role in shaping the regulatory reform efforts at the retail level, changes to wholesale market institutions in California are vital in light of the mutually reinforcing relationship between effective competition

² See, e.g., Letter of the Federal Trade Commission to House Commerce Committee Chairman Thomas Bliley, Analysis of H.R. 2944 (Jan. 14, 2000) (Bliley Letter).

³ The staff of the FTC has commented to FERC on electric power regulation, for example, in Docket No. RM99-2-000 (regional transmission organizations (RTOs)) (Aug. 16, 1999) (FTC RTO Comment); Docket EL99-57-000 (Entergy transco proposal) (May 27, 1999); and Docket RM98-4-000 (Sept. 11, 1998). The staff of the FTC also has submitted comments to numerous state agencies regarding electric power industry restructuring that have been complied in an FTC Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform (July 2000). The FTC staff comments and report are available at: http://www.ftc.gov/be/advofile.htm.

⁴ Proposed Order at 5.

at both the wholesale and retail levels.⁵

The Proposed Order attributes the pricing and reliability difficulties experienced in California to a combination of inappropriate wholesale market rules, imperfect decision making structures within the California Independent System Operator (ISO) and Power Exchange (PX),⁶ flawed retail regulatory requirements that are under state jurisdiction, and extreme weather conditions.⁷ This view is consistent with information provided by the Market Surveillance Committee of the California Independent System Operation and FERC staff.⁸

The problems identified by FERC and these reports suggest that market power may have been exercised in these markets. The FTC staff has advised numerous states that a successful transition from regulation of vertically integrated monopolies to effective competition is likely to

⁶ Under California state law, the ISO and the PX are separate organizations. The ISO operates and controls the transmission grid to ensure nondiscriminatory access to non-transmission owning electric power generators and the PX operates an exchange where buyers and sellers meet to trade wholesale electric power.

⁷ Proposed Order at 3-5, 10, 13-4.

⁵ Without effective competition at the wholesale level, effective competition at the retail level will be substantially less likely; and without effective competition at the retail level, effective competition at the wholesale level will be substantially less likely. Federal Trade Commission, Public Workshop: Market Power and Consumer Protection Issues Involved with Encouraging Competition in the U.S. Electric Industry (Sept. 1999), Session III. The workshop's transcript is available at <http://www.ftc.gov/bcp/elecworks/index.htm>.

⁸ Proposed Order at 8-9, App. D. *See also* Staff Report to the Federal Energy Regulatory Commission on Western Markets and Causes of the Summer 2000 Price Abnormalities (Nov. 1, 2000); Market Surveillance Committee of the California Independent System Operator, "An Analysis of the June 2000 Price Spikes in the California ISO's Energy and Ancillary Services Markets" (Sept. 6, 2000) (Market Surveillance Committee Report). FERC may wish to clarify why the full set of recommendations included in the Market Surveillance Committee Report are unnecessary to address the problems in California identified by both the Proposed Order and the FERC Staff Report by FERC in the Proposed Order.

require well-designed and fully-implemented market power mitigation policies.⁹ A regulatory reform process that initiates competition without considering incentives to exercise market power in generation and transmission in the design of market rules, market institutions, and market structures, may put the entire regulatory reform process at risk from an exercise of market power that harms consumers. Given the experience in California, FERC may wish to review its past and prospective market power remedies in California and elsewhere with this perspective in mind. It may also wish to further encourage the States to do the same.

FERC has proposed a wide variety of potential remedies for deficiencies in market rules and institutions that likely contribute to high prices and poor reliability in electric power markets in California (and other portions of the Western Interconnect¹⁰). FERC has identified both shortterm¹¹ and long-term remedies that are under its own jurisdiction¹² and it also has identified

¹¹ The immediate remedial steps proposed by FERC include: (1) eliminate the requirement that California's largest investor owned utilities sell all the electric power they generate and purchase all the electric power they sell at retail through the California PX; (2) reduce underscheduling of load and generation; (3) replace the stakeholder boards of the ISO and PX with independent boards; and (4) file generation interconnection standards.

¹² The longer-term remedies proposed by FERC include: (1) develop a planning reserves requirement for forward markets; (2) implement a soft cap of \$150 on supply bids for approximately two years; establish an integrated/one venue day-ahead market; (3) develop proactive market power mitigation proposals; redesign the congestion management system for California; implement a system of demand reduction bidding as a source of supply; and (4) focus California's RTO filing on integrating California with the other portions of the Western

⁹ See FTC Staff Report on Electric Power Regulatory Reform, *supra* n. 3, at Chapter II. See also Bliley Letter, *supra* n. 2.

¹⁰ The Western Interconnect includes all of the western states (as well as portions of western Canada and northwestern Mexico). Within the Western Interconnect, all generators operating in connection with the transmission grid are synchronized. The Western Interconnect is one of three interconnects within the continental U.S. that largely operate independently of each other.

remedies that are primarily the responsibility of California authorities.¹³ This comment focuses on selected aspects of the remedies within FERC's jurisdiction, although we also support FERC's description of market enhancements that fall under the State's authority that the State may wish to consider. Indeed, we understand that the State has acted already on several of FERC's suggestions.

We expect that progress towards competitive wholesale markets in California and elsewhere will be enhanced by clear guidance from FERC regarding the fundamentals for effective competition. This guidance is crucial as the process FERC has put in place to establish regional transmission organizations (RTOs)¹⁴ is implemented in parts of the country that do not currently have an RTO (*i.e.*, either in independent system operator (ISO) or transco), and state-initiated retail competition programs are formed and begin operation. FERC may wish to consider creating a benchmark or a baseline of RTO characteristics and operations as part of its revisions to California's wholesale electric power market rules and institutions. Such benchmarks or baselines do not have to be a "one-size-fits-all" approach, but rather are starting points that can

Interconnect.

¹³ FERC's list of recommendations for action by California authorities include: (1) develop and offer a wide variety of forward markets; (2) expedite generation and transmission siting; (3) implement steps that will provide customers with accurate and timely pricing information; and (4) eliminate limits on forward contracting.

¹⁴ FERC Order No. 2000, Regional Transmission Organizations (Dec. 17, 1999). The term RTO includes two primary forms of organization, the non-profit, independent system operator (ISO) and the for-profit transmission company (Transco). California's wholesale electricity transactions take place under an ISO format. Under a Transco format, the grid operator is a regulated, for-profit entity, intended to be independent of generation owners.

Public utilities that are already members of an existing ISOs are required to file with FERC by January 15, 2001, a plan to convert their ISO to an RTO that meets the requirements set forth in Order No. 2000.

allow for variations to optimally meet conditions in the various states and regions.

We also provide specific observations (1) favoring FERC's proposed limitation on the duration of its "soft" price caps applicable to the California PX and ISO, (2) encouraging FERC to broaden the scope of the California ISO or to give special attention to "seams" issues if there are additional RTOs within the Western Interconnect, and (3) suggesting that FERC consider whether siting problems and the lack of active customer participation in California electric power markets are so significant that they preclude FERC finding in the future that market-based rates are just and reasonable or that utilities under FERC's jurisdiction may charge market-based rates.

II. BENCHMARKING OF RTO CHARACTERISTICS AND FUNCTIONS IS LIKELY TO FACILITATE IMPROVED MARKET DESIGN AND DECISION MAKING IN CALIFORNIA AND ELSEWHERE

In 1999, we suggested that FERC establish benchmark examples of successful RTO characteristics and functions in light of FERC's substantial experience in the operation of wholesale electric power markets.¹⁵ We reiterate our suggestion here as FERC considers how the organization controlling and operating transmission services in California should be governed and operated.

FERC has much experience in the operation of wholesale markets that could be used to speed the progress toward competitive markets in California and elsewhere. This experience has been gained since FERC began the transition of the electric power industry from regulation to competition with promulgation of open access rules that apply to transmission facilities owned by vertically integrated utilities. These rules sought to prevent discrimination by vertically integrated utilities against independent generators in providing assess to utilities' transmission services.

¹⁵ See FTC RTO Comment, supra n. 2, at 4-5.

After a couple years of operation, FERC concluded that these rules were insufficient to ensure non-discriminatory access to monopoly-controlled transmission assets, and in 1999 it ordered the voluntary formation of RTOs within all parts of the country. These RTOs would have to conform to certain characteristics and practices to ensure non-discriminatory access to the transmission grid.¹⁶

The Proposed Order states that the rates for wholesale power in California are not "just and reasonable" and that, as a result, some of the market rules and institutions that led to these rates must to be changed in order for effective competition to take place. In our view, the ISO/RTO reformation process in California and elsewhere is sufficiently advanced to benefit from more positive guidance from FERC in the form of benchmark examples of successful RTO design elements. For instance, in our August 1999 comment in FERC's RTO rulemaking proceeding, we identified locational marginal pricing (LMP) as a potential benchmark for how to price transmission congestion effectively.¹⁷ Similarly, we identified interconnection-wide RTOs as a potential benchmark in considering the appropriate geographic scope of an RTO.¹⁸

¹⁶ FERC Order No. 2000, Regional Transmission Organizations at 35, 70 (Dec. 17, 1999) (Order No. 2000). FERC has ordered that RTOs be operational by December 15, 2001.

¹⁷ FTC RTO Comment at Section III.D. The Proposed Order finds that California's existing zonal congestion management system is "fundamentally flawed" and requires that analysis of California's congestion management redesign include consideration of LMP, but does not identify LMP as the congestion management redesign that FERC will use as the default if the new ISO Board fails to propose a demonstrably better alternative to LMP (or show that the costs of implementing LMP in California exceed the benefits relative to those of modifying the zonal system). During the period in which FERC has found California's zonal system to be fundamentally flawed, the LMP congestion management system used by the PJM ISO has not warranted similar FERC expressions of concern and FERC has approved the use of LMP in New York and New England.

¹⁸ *Id.* at Section III.C. Geographic scope also is discussed in Section III.B, *infra*.

To establish appropriate benchmarks, FERC may wish to gather, publicize, and analyze comparative market performance information on the existing ISOs, both longitudinally and cross sectionally.¹⁹ By doing so, FERC can help assure that the benchmarks it references are objectively the best market design elements and practices to account for varying market and regulatory conditions.

Use of benchmark examples may reduce delays in revising aspects of the California ISO and PX to make their performance more acceptable and consistent with the RTO requirements put forth in Order No. 2000.²⁰ Providing positive benchmark examples also may avoid diversion of public attention to proposals that are highly unlikely to facilitate effective competition. By putting forward benchmark examples, FERC would encourage proposals in California that start from an acceptable base, not from the lowest common denominator among stakeholders.²¹ By treating benchmark examples as a backstop design that would be applied absent a demonstrably

In identifying benchmarks, separate benchmarks may be required for RTOs that are ISOs and RTOs that are Transcos.

¹⁹ See FTC RTO Comment, supra n. 3 at Section III. D.

²⁰ The minimum characteristics in FERC Order 2000 include: (1) independence of the RTO from generation owners, (2) a geographically broad scope and regional configuration, (3) nondiscriminatory operational authority by the RTO of the transmission grid, and (4) ensuring short-term reliability. The seven minimum functions in Order 2000 include: (1) designing and administering tariffs for use of the grid, (2) managing congestion within the grid, (3) managing parallel path flows, (4) offering ancillary services, (5) managing OASIS and Total Transmission Capability (TTC) and Available Transmission Capability (ATC), (6) monitoring market behavior, and (7) planning and expansion of the transmission grid.

²¹ Among operating ISOs, California is unique in that its ISO and PX Boards of Directors have been composed of interested parties, including generation owners. FERC found that the California stakeholder boards were often gridlocked and their members subject to untoward pressures. As a result, FERC has proposed that the boards be reconstituted in a similar fashion to other ISO boards. Proposed Order at 27-32.

superior alternative plan, FERC could help focus the attention of market participants on identifying specific regional differences that warrant variations in the characteristics or functions of the California ISO and PX (or RTOs in general²²).

III. COMMENT ON SPECIFIC REMEDY ELEMENTS

A. A Soft Cap on Rates Is Likely to Discourage Efficiency in Dispatch and Investment If Extended Beyond the Transition Period

FERC proposes a temporary "soft" cap on prices set for wholesale power by the California PX and ISO.²³ Under the FERC soft price cap proposal, the PX and ISO would continue to provide a single price auction in the wholesale spot markets it operates whenever the market-clearing price is below \$150 per Megawatt (MW) hour.²⁴ If the market clears at a price above \$150, however, each bid accepted that exceeds \$150 would receive only the price that the specific generator bid (rather than the price that clears the market). Further, bids exceeding \$150 would be reported to FERC along with certain cost information.²⁵ Bids below \$150, that are

²² For example, some regions of the country include major public power systems that are not permitted to participate in a Transco by transferring ownership of transmission assets to the Transco. Where this is the case, the Transco model might be adjusted, for instance, to allow these entities to lease their facilities to the Transco or otherwise participate on a different basis than the for-profit, private transmission owners in the region.

²³ Under California law, public utilities are required to sell all of their generation into and purchase all of their wholesale electric power needs for retail customers from the PX in various spot markets. FERC has proposed to eliminate this requirement because it has resulted in excessive cost exposure for utilities. Proposed Order at 23-25.

²⁴ Proposed Order at 38. Under the existing single-price auction, all accepted bids receive the price that clears the market (*e.g.*, if an energy supplier bids \$30 MW/hour, and all bids and offers are met when the last bid is \$45 MW/hour, all suppliers receive \$45 MW/hour). The market clearing price is the price at which demand equals supply in a particular time period.

²⁵ FERC has proposed that such cost information include incremental generation costs. Proposed Order at 39. This information may be more important in assessing whether bids

made when the market clearing price exceeds \$150, would receive a price equal to the highest accepted bid that is less than \$150.²⁶

Although there may be a reasonable rationale for the soft price cap proposal to constrain the exercise of market power while the wholesale market rules and institutions are revised, we support FERC's proposal to terminate this constraint after the transition period is completed. In the long term, we believe that an ongoing soft price cap would likely raise prices for wholesale electric power, create inefficient plant dispatch, and distort generation and transmission investment decisions.

Traditional merit order dispatch of generation is based on incremental cost bidding/pricing (*i.e.*, the generating plants with the lowest incremental costs are used first to meet demand, and as demand increases, more costly plants are brought on line) and results in minimum costs, system-wide, to produce a specified level of output.²⁷ Under a single-price auction approach (which is in use today), a plant has incentives to bid its incremental costs on an ongoing basis because it recognizes that when the market-clearing price exceeds its bid, its plant will be dispatched and it will obtain revenues above its incremental costs that can contribute toward covering its fixed costs.

In an auction system in which a bidder is uncertain of whether it will be paid the market

²⁶ Proposed Order at n. 85.

represent an exercise of market power than cost information based on prices being paid in areas of the Western Interconnect outside of California.

²⁷ When generators are dispatched (called into service) in merit order, from lowest incremental cost to highest incremental cost, the total incremental costs, system-wide, are minimized for any given level of output. Because merit order dispatch minimizes system costs, it is economically efficient.

clearing price as would happen under the soft price cap approach, a bidder many not have an incentive to bid at the plant's incremental costs. In an industry, such as electric power generation, where fixed costs may be large, moving away from a single-price auction likely will cause bidders to shift toward bids based on their average costs.²⁸ For instance, when the market clearing price exceeds the \$150 cap and the plant's bid is less than \$150, there likely will be less revenue above the bid price (which would be available to cover the plant's fixed costs) under the proposed soft cap than under the existing single-price auction. To cover fixed costs under a soft cap system, other things equal, some generators would have an incentive to place higher bids based on average costs. Bidding based on average costs, for example, would result in revenues that cover both fixed and incremental costs when the plant's bid is accepted, but likely would result in out-of-merit dispatch.

This shift in bidding strategy also may lead to distortions in expected profits, which, in turn, are an important component in investment decisions. An extended departure from bidding rules that support merit order dispatch may distort investment decisions including decisions on where, when, and if to site generation and transmission assets in California.

For the reasons described above, the proposed soft price cap on trades of electricity through the PX and ISO for an extended duration may increase the likelihood of out-of-merit dispatch and distorted generation and transmission investment decisions. We, therefore, agree

²⁸ For example, nuclear plants generally have very low incremental costs and substantial fixed costs. Under merit dispatch/single-price auctions, nuclear plants are treated as base load plants that are dispatched in virtually all periods. If bids from nuclear plants increased in an effort to cover fixed costs that would no longer be covered because of a price cap, the nuclear plants would be more likely to bid prices higher than the market clearing price in some periods. If so, plants with higher incremental cost would be substituting for nuclear plants with the result being higher incremental costs to meet demand on a system-wide basis.

with FERC's proposal to avoid prolonging the duration of the proposed soft caps on prices set by the California PX and ISO beyond the transition period.

B. Matching the Scope of California's Supply Relationships to the ISO's Scope Entails Expanding the California ISO's Operations or Careful Coordination of RTOs throughout the Western Interconnect

FERC observes that California is increasingly dependent on electric power generated outside the state to satisfy its electric power demand. It further observes that power consumed in California is generated throughout the Western Interconnect.²⁹ Indeed, FERC has already identified the geographic scope of an RTO as a significant issue to increased electric reliability and as a key for competitive wholesale markets.³⁰ This extensive reliance on imports of power from the rest of the Western Interconnect contrasts sharply with the fact that the California ISO and PX operate only within the boundaries of the state.

Given the reality of the geographic sources of electric power to serve California and the severe problems that have occurred in trying to arrange suppliers for California through a single-state entity, we recommend that FERC explicitly recognize the physical connectivity of the entire Western Interconnect as it considers RTO scope issues in the follow-ups to this proposed order and to Order 2000 more generally. If the RTO serving California does not encompass the entire Western Interconnect, then considerable attention will need to be given to "seams" issues between RTOs operating within the Western Interconnect.³¹

²⁹ Proposed Order at 37, App. D. *See also* FTC RTO Comment, *supra* n. 2, at Section III.C.

³⁰ FERC Order No. 2000.

³¹ "Seams issues" is a term used to connote policies governing interactions between neighboring RTOs. When RTOs are too small in geographic scope and seams issues are not

C. State Siting Reforms and Measures to Increase the Price Sensitivity of Market Demand May Be Prerequisites for Effective Competition

We commend FERC for recognizing the critical nature of entry reforms (generation and transmission siting and interconnection standards) and measures to increase customer demand sensitivity in constraining exercise of market power in electric power markets.³² Entry³³ and demand sensitivity to price changes³⁴ are key elements in the analysis of market power. FERC's approach in the Proposed Order is to identify improved entry conditions and increased demand sensitivity as important reforms that are under the jurisdiction of California authorities.³⁵ FERC does not claim that its efforts to facilitate the transition of markets in California to effective competition are dependent on entry reforms and measures to increase demand sensitivity under

³² Proposed Order at 32, 46-8.

³³ Entry in this context means obtaining access to additional sources of electric power. Siting approval for either new generation or new transmission could provide additional electric power for a customer or group of customers. We note that while interconnection standards for traditional generators are within FERC's jurisdiction (Proposed Order at 32), interconnection standards for distributed generation/energy installations may be within the jurisdiction of the state. Distributed generation entry (siting and interconnection standards) may be an important element in supplying electric power in California and in other states. *See* FTC Staff Comment to the Public Utilities Commission of the State of California, Docket No. R.98-12-015 (Mar. 17, 1999) (discussing distributed generation).

³⁴ In order to integrate demand into a market and increase market demand sensitivity, customers must have access to accurate and timely information about prices. This information allows customers to make informed decisions about how much and when to consume electric power and creates accurate longer-term incentives to invest in energy efficiency and storage devices or in on-site generation. Generally, this type of accurate, timely information requires time-of-day metering. *See* FTC RTO Comment at 5.

³⁵ Proposed Order at 46-8.

effectively addressed, rate pancaking, reliability policy differences, and differing congestion management systems, for example, can inhibit transmission transactions that would otherwise be efficient and increase competition to the benefit of consumers.

control of California authorities.³⁶

Our experience in antitrust enforcement, however, suggests that the combination of lack of entry impediments and relatively price-sensitive market demand may well be crucial to achieving effective competition, although the importance of entry and market demand sensitivity may vary from situation to situation.³⁷ In some situations, effective competition may be unlikely without ease of entry and enhanced market demand sensitivity. If FERC finds that lack of state siting reforms and measures to increase market demand sensitivity would preclude effective competition, FERC may wish to make this relationship explicit. FERC may wish to indicate that in the future, allowing market-based rates for FERC jurisdictional utilities and finding rates to be just and reasonable may be in jeopardy absent appropriate state reforms.³⁸

IV. CONCLUSION

In response to severe reliability and pricing problems affecting California and the Western Interconnect more generally, FERC has proposed major, but reasonable changes in the operation of California's wholesale electric power institutions and market rules. FERC's approach has been to identify elements that need to be fixed, but in many instances, its guidance on how to fix the

³⁶ Proposed Order at 3-4.

³⁷ The Department of Justice/FTC Horizontal Merger Guidelines reflect the central importance of both entry and demand substitution in assessing whether a merger is likely to substantially increase the likelihood of anticompetitive effects. If entry is easy, for example, and/or buyers reduce their purchases of a product substantially if price increases by a small, nontransitory amount, then it is unlikely that the merged firm, acting either unilaterally or in coordination with others, would be able to profitably maintain a merger-related price increase.

³⁸ FERC's primary leverage in facilitating the transition of markets to competition is through its authority under the Federal Power Act to approve market-based rates for utilities under its jurisdiction and to find rates to be just and reasonable. Proposed Order at 3 and 4, notes 4 and 5 inclusive. market is limited. At this point in the process of reforming California's ISO (and guiding formation of RTOs elsewhere through the Proposed Order), FERC may wish to offer specific benchmarks for effective formation and operation of RTOs.

We commend FERC for proposing to limit the duration of its "soft" cap departure from the California ISO's and PX's single-price auctions. We also encourage FERC to consider expanding the scope of the California ISO or focusing on seams issues between RTOs operating in the Western Interconnect. Finally, we observe that in some circumstances, FERC may wish to more explicitly recognize that success of its regulatory reform efforts is contingent on state reforms of siting conditions for new generation and transmission enhancements as well as reforms that increase the sensitivity of market demand to price changes by providing customers with accurate and timely price signals (time-of-day metering) regarding their electric power purchases.

Respectfully submitted,

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