

**Before the  
FEDERAL ENERGY REGULATORY COMMISSION**

<b>San Diego Gas &amp; Electric Company</b>	)	
	)	
<b>Complainant,</b>	)	
<b>v.</b>	)	
	)	<b>Docket Nos. EL00-95-000 et al.</b>
<b>Sellers of Energy and Ancillary Services</b>	)	
<b>Into Markets Operated by the California</b>	)	
<b>Independent System Operator and the</b>	)	
<b>California Power Exchange</b>	)	
	)	
<b>Respondents.</b>	)	

**Comment of the Staff of the  
Bureau of Economics and of Policy Planning  
of the Federal Trade Commission<sup>1</sup>**

November 22, 2000

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\* 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.

**Before the**

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<sup>1</sup> 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](mailto:jhilke@ftc.gov)).

legislative proposals that may affect competition or the efficiency of the economy.<sup>2</sup> 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,<sup>3</sup> 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.<sup>4</sup> 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

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<sup>2</sup> 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).

<sup>3</sup> 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 compiled 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>>.

<sup>4</sup> Proposed Order at 5.

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<sup>5</sup> 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>>.

<sup>6</sup> 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 effeoryectio etietapeti ion

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

<sup>10</sup> 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.

<sup>11</sup> 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.

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Interconnect.

<sup>13</sup> FERC's list of recommendations for action by California authorities include: (1)

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"

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<sup>15</sup> 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.<sup>16</sup>

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.<sup>17</sup> Similarly, we identified interconnection-wide RTOs as a potential benchmark in considering the appropriate geographic scope of an RTO.<sup>18</sup>

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<sup>16</sup> 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.

<sup>17</sup> 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.

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



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<sup>19</sup> See FTC RTO Comment, *supra* n. 3 at Section III. D.

<sup>20</sup> 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.

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

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 general<sup>22</sup>).

### **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.<sup>23</sup> 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.<sup>24</sup> If the market clears at a price above \$150, however, each bid accepted that exceeds \$150 would receive only the is . pathom

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<sup>22</sup> 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.

<sup>23</sup> 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.

<sup>24</sup> 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.

<sup>25</sup> 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.<sup>26</sup>

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.<sup>27</sup> 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

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

<sup>26</sup> Proposed Order at n. 85.

<sup>27</sup> 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 may 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.<sup>28</sup> 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

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<sup>28</sup> 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.<sup>29</sup> 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.<sup>30</sup> 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.<sup>31</sup>

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

<sup>30</sup> FERC Order No. 2000.

<sup>31</sup> "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.<sup>32</sup> Entry<sup>33</sup> and demand sensitivity to price changes<sup>34</sup> 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.<sup>35</sup> 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

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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.

<sup>32</sup> Proposed Order at 32, 46-8.

<sup>33</sup> 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).

<sup>34</sup> 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.

<sup>35</sup> Proposed Order at 46-8.

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<sup>36</sup> Proposed Order at 3-4.

<sup>37</sup> 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

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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Jeremy I. Bulow, Director  
John C. Hilke, Electricity Project Coordinator  
Bureau of Economics

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Susan S. DeSanti, Director  
Michael S. Wroblewski, Advocacy Coordinator  
Policy Planning  
Federal Trade Commission  
600 Pennsylvania Ave, NW  
Washington, DC 20580