UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company, **Complainant**	)	
v.	)	**Docket Nos. EL00-95-000** **EL00-95-045** **EL00-95-075**
Sellers of Energy and Ancillary Services into Markets Operated by the California Independent System Operator Corporation and the California Power Exchange, **Respondents.**	)	
Investigation of Practices of the California Independent System Operator and the California Power Exchange	)	**EL00-98-000** **EL00-98-042** **EL00-98-063**

CALIFORNIA PARTIES' SUPPLEMENTAL EVIDENCE OF MARKET MANIPULATION BY SELLERS, PROPOSED FINDINGS OF FACT, AND <u>REQUEST FOR REFUNDS AND OTHER RELIEF</u>

March 3, 2003

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Pursuant to the Commission's November 20, 2002, Order on Motion for Discovery Order,[1] the People of the State of California, *ex rel*. Bill Lockyer, Attorney General, the California Electricity Oversight Board, the Public Utilities Commission of the State of California, Pacific Gas and Electric Company (PG&E), and Southern California Edison Company (Edison) (collectively, the California Parties) hereby submit their supplemental evidence of market manipulation by sellers, proposed findings of fact, and request for refunds and other relief. This filing consists of this pleading, the sworn testimony of nine expert

[1] *San Diego Gas & Elec. Co.,* 101 FERC ¶ 61,186 (2002) (*November 20th Order*).

witnesses, and a total of 348 exhibits, including deposition transcripts,[2] tapes of trader telephone recordings, e-mails, analyses of California Independent System Operator Corporation (ISO) and California Power Exchange Corporation (PX) data, and other relevant evidence, together with the charts and indices the Commission required.

I. INTRODUCTION AND OVERVIEW

From May 2000 through June 2001, the total cost of electricity needed to serve California was more than $44 billion.[3] This compares to less than $25 billion total for the years 1998, 1999, and 2002, combined. This extraordinary increase in cost imposed great hardship on the State's citizens and businesses, crippled the State's two largest utilities, and took the State's budget from a multi-billion dollar surplus to a multi-billion dollar deficit, thereby robbing schools, police forces, and many other essential services of needed funds. Ultimately, it caused a life-threatening power crisis that sent the nation's most populous state into rolling blackouts.

As the California Parties explain herein, the cause of this unprecedented crisis is now known. Beginning in the Spring of 2000, market conditions created an environment that was ripe for abuse by sellers, who then drove prices far above competitive levels through a pervasive pattern of market manipulation. This market abuse by sellers -- and the resulting disastrous effects on prices and reliability -- continued until the Commission stopped it, suddenly and permanently, by instituting a region-wide must-offer requirement and price cap just before the Summer of 2001. So complete was the effect of the Commission's regional mitigation rules on seller conduct that, since those rules were instituted, prices have returned, and remained at, pre-

[2] Due to the limited amount of time available to prepare this pleading following the close of discovery, a few of the deposition transcripts are not yet final. The California Parties will file the final, versions of these transcripts when they become available.

[3] This includes only the portion of California located within the California ISO grid.

2000 levels. Even on the hottest days of the summer (with system demand more than 25 percent higher than during rolling blackouts in the winter of 2000), system emergencies have been few and rolling blackouts non-existent.

This pervasive pattern of seller market manipulation, which began in the Spring of 2000 and ended in the spring of 2001, resulted in prices that were in violation of the Federal Power Act (FPA), which requires that all rates be just and reasonable.[4] It also involved conduct that was in violation of filed tariffs and Commission rules. This conduct thus resulted in the inequitable and unjust enrichment of all sellers in the market.

We know definitively that Enron manipulated the market and violated market rules, as two of its top traders have already pled guilty. As Timothy Belden, Enron's chief West-Coast trader, admitted in his sworn plea agreement:

> I and other individuals at Enron agreed to devise and implement a series of fraudulent schemes through these [ISO and PX] markets. We designed the schemes to obtain increased revenue for Enron from wholesale electricity customers and other market participants in the state of California. . . . As a result of these false schedules, we were able to manipulate prices in certain markets, arbitrage price differences between the markets, obtain "congestion management" payments in excess of what we would have received with accurate schedules, and receive prices for electricity above price caps set by the ISO and the Federal Energy Regulatory Commission.[5]

But Enron was not alone. In fact, there was a general perception among sellers that the rules didn't apply -- that market-based pricing meant that anything goes. Based on this view, sellers engaged in conduct that would be shocking in a fully deregulated market -- and that is

[4] 16 U.S.C. § 824d (a) (2000) (requiring all wholesale electricity and transmission "rates and charges" to be "just and reasonable," and declaring that "any such rate or charge that is not just and reasonable is . . . unlawful").

[5] Exh. No. CA-229 at 3, Plea Agreement No. CR-02-0313 (N.D. Cal. 2002).

almost incomprehensible in a market for the sale of a product essential to health and safety, a product necessary to the production of virtually all other products, and a product that was placed by law under the pervasive regulatory authority of this Commission.

As shown in the attached testimony, deposition transcripts, e-mails and other evidence, sellers engaged in the following conduct that, taken together, caused the California electricity crisis:

- Withholding of Generation: To varying degrees, the major independent generating companies in California (AES/Williams, Duke, Dynegy, Mirant, and Reliant) engaged in the deliberate and systematic withholding of energy from the market, driving up prices by creating false shortages and scarcity. This withholding took multiple forms. Some of these generators falsely reported to the ISO that generating units were forced out of service for mechanical reasons when the plant's own records show that the plant was capable of normal operation. On over 20 occasions, totaling over 350 hours, generators placed units on "reserve shutdown" -- that is, they simply shut the plant down for what they asserted to be economic reasons when no maintenance was required -- all during times when the ISO had declared a system emergency. Dynegy, Mirant, Reliant, and AES/Williams also withheld by simply not bidding their output into the market even though their plants were fully operational -- again, often during system emergencies. Finally, these generators withheld generation from the market by bidding so high, and so far in excess of their costs, that they deliberately priced themselves out of the market. These withholding strategies -- often involving more than the 1,000 MW of capacity the Commission found shocking in the recent revelations concerning Reliant's withholding -- succeeded in keeping the market in a near-constant state of shortage and the ISO in a near-constant state of panic as it was forced to fight against time to obtain the power needed to keep the lights on. In addition to being naked exercises of market power, these practices violated the ISO Tariff as they involve giving the ISO false outage information, failing to operate generation to relieve system emergencies, and engaging in the anomalous bidding or withholding of generation.

- Bidding to Exercise Market Power. Generators and other suppliers submitted bids into the PX and ISO energy markets the only purpose of which was to exercise market power. This includes so-called "hockey stick" and other bids that increase based on conditions unrelated to the seller's costs. Often, generators and suppliers bid far higher after the ISO declared a system emergency, knowing that the ISO would need all available power and would be willing to pay any price to get it. These exercises of market power were so pervasive that they were the rule among suppliers, not the exception. This conduct not only increased prices far above competitive levels, but also violated the ISO Tariff, which prohibits generators from acting in a manner that fails to relieve system emergencies, as well as prohibiting anomalous and harmful bidding practices.[6]

- Scheduling of Bogus Load. Suppliers intentionally submitted false load schedules to increase scarcity and prices in the day-ahead market and to move resources into the more easily manipulated real-time markets. The Enron Memos referred to this strategy as Fat Boy or Inc-ing Load and called it the "oldest trick in the book." The ISO Tariff, however, requires that schedules be balanced and be based on actual "forecast" demand to be served by the schedule, not fictional demand. The evidence indicates strongly that, in addition to Enron, numerous other market participants have pursued this trading strategy, including Sempra, Powerex, Mirant, Dynegy, Reliant, Hafslund Energy, and, among others, the cities of Anaheim, Glendale (in cooperation with Enron), Pasadena and Redding (in apparent cooperation with Enron).

- Ricochet-type Export-Import Games. Generators and power marketers created artificial scarcity and reliability concerns by exporting vast amounts of power out of California on a day-ahead basis, only to import the same power back into California in an attempt to sell at inflated prices into the real-time markets or under Out-of-Market (OOM) agreements with the ISO or the State of California acting through the California Energy Resources Scheduling Division (CERS) of the California Department of Water Resources (CDWR). This export-import strategy, also referred to as Ricochet or "Megawatt Laundering" in the Enron Memos, increased day-ahead market prices, caused significant reliability concerns, forced the ISO and CERS into costly OOM purchases, and facilitated manipulation of the ISO's real-time markets in an attempt to evade Commission-authorized price caps. The Commission Staff has already determined that this practice is an exercise of market power.[7]

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[6] Sellers have long attempted to divert attention from their misconduct by alleging that so called "load under-scheduling" by buyers contributed to the higher prices and the market's dysfunction. The California Parties' evidence conclusively shows that this "blame the victim" strategy is not only false, but that sellers engineered the issue by causing the underscheduling problem entirely themselves. It was pervasive seller withholding in the PX markets that forced buyers to buy, and the ISO to scramble to find, power at the last minute. Buyers cannot buy, at any price, what sellers refuse to offer. In fact, had buyers offered to pay up to the PX price cap for all of their demand, as the sellers apparently propose, the ISO would still have been short power in real-time during 201 out of 208 emergency hours in the summer of 2000 as a result of seller underoffering, but the cost of electricity to California would have increased by more than $6.5 billion.

[7] *August 2002 Initial Staff Report,* Docket PA02-2, slip op. at 94.

These activities also violated the ISO Tariff as they were premised on a false export schedules submitted to evade ISO price caps. Numerous market participants appear to have pursued this trading strategy, including Enron, Powerex, Sempra, Mirant, and Williams. Some sellers, such as Reliant, appear to have undertaken efforts specifically to hide Ricochet transactions. Others -- such as Sempra and Dynegy, Coral and Glendale, and Constellation and Los Angeles Department of Water & Power -- cooperated with the result of making detection more difficult. The implementation of this trading strategy also often required knowing, willing participation from surrounding utilities who provided "parking" services; these participants include Public Service Company of New Mexico, Eugene Water, El Paso Electric, PacifiCorp, and Snohomish, among others. The evidence also shows that Powerex exported California power into Canada during time periods when the ISO operated under emergency conditions, which violated Powerex's export license.

- <u>Death Star and Other Congestion Games</u>. Numerous market participants pursued Enron-type congestion games, such as circular export-import schedules (Death Star). These trading games resulted in payments for congestion relief by creating fictitious congestion, as well as fictitious counter-flows, without actually moving any power or relieving any congestion. In addition to circular export-import loops, such congestion games included cut export schedules and offsetting ISO-internal schedules. These games resulted in reliability problems, higher zonal prices, and payments for the relief of congestion that both never existed and, consequently, was never relieved. They also were predicated on the submission of counter-flow schedules that the seller never intended to deliver to loads that did not exist, and as such violated the ISO Tariff. Available evidence reveals the entities involved or participating in such congestion games include Enron, Coral, Sempra, Mirant, the Modesto Irrigation District (MID), Duke and Powerex. Apparently willing partners in these congestion games include the Cities of Redding and Glendale, LADWP, and the Northern California Power Agency.

- <u>Double-Selling of Ancillary Service Capacity from ISO-Internal Generation</u>. Analysis of the data obtained in discovery shows that some generators sold reserves, but then failed to keep those reserves unloaded and available for the ISO. That is, generators sold capacity to the ISO for use as reserves and subsequently sold the <u>same</u> capacity into the ISO's real-time energy market as "uninstructed deviations." This created reliability problems both because the awarded Ancillary Service capacity was not available to the ISO when needed and because the ISO was forced to deal with excessive uninstructed energy. But as a result of this practice, the generators inappropriately received payments for both (1) the Ancillary Service capacity that they did not keep unloaded and (2) the uninstructed energy produced out of those Ancillary Services commitments. The practice is expressly prohibited by the ISO Tariff

(Amendment 13) but the ISO did not begin fully enforcing the rule until September 10, 2000. During the Summer of 2000, Mirant, Reliant, and Dynegy engaged in substantial amounts of "double-selling."

- Selling of Non-Existent Ancillary Services. Several sellers increased costs and created reliability problems by selling Ancillary Services from resources that were either already committed to other sales or incapable of providing the Ancillary Services in the day-ahead market, but hiding the non-existence of the services by buying the awarded services back in the hour-ahead market. This practice violates the ISO Tariff because sellers of Ancillary Services within the ISO control area required to identify the resources that will, in fact, provide the Ancillary Services sold and all sellers of Ancillary Services are required to ensure that the capacity is available if needed. Enron tellingly referred to this strategy as Get Shorty (since a "short" sale refers to the sale of a stock, commodity, or service that the seller does not own). Sellers similarly sold and fully repurchased Ancillary Services without any intent to deliver the services they sold, thus increasing costs and degrading reliability. Entities involved in such sale and repurchase of Ancillary Services that either were non-existent or never intended to be delivered were Enron, Sempra, Coral (likely in cooperation with Glendale), MID, Avista, the City of Azusa and Williams.

- Sharing of Non-Public Generation Outage Information. A number of the largest sellers, including Dynegy, Duke, and Williams, purchased a service from a company called Industrial Information Resources, Inc. (IIR). IIR provided to these sellers detailed, non-public information, on a daily basis, regarding their competitors' planned and on-going generation outages. All of the plant outage information that IIR provided was obtained from the plant personnel of the companies experiencing the outage, some of which were simultaneously receiving information, through IIR, about their competitors' outages. Sellers would also call IIR with specific questions regarding specific plant outages and IIR would then call plant personnel on their behalf and report back what the plant personnel told them. The sellers receiving and sharing competitor outage information from IIR then used this information in setting prices and making decisions as to where and how much to sell. These sellers engaged in this conduct despite the fact that the ISO Tariff prohibits market participants from reviewing other market participants' generation outage programs and despite the companies' own internal rules and guidelines that prohibited any discussion with competitors regarding those companies' generation outages. This improper sharing of generation outage information resulted in higher prices for energy and Ancillary Services by facilitating market manipulation by sellers and the coordination of their conduct.

- Collusion among sellers. The discovery effort has yielded specific evidence of widespread collusion among many sellers, power marketers and public power entities. Evidence documents that a number of market participants, including many public power entities, were jointly implementing or facilitating Enron-type trading strategies. In addition to written and verbal agreements providing for joint action, there were a number of information sharing channels, such as trader conversations, industry groups, and information services through which competitive market information was shared.

- Manipulation of NOx Emission Market. Evidence suggests that sellers manipulated the market for NOx emissions in the South Coast Air Quality Management District through a series of wash trades that created the appearance of a dramatic price increase that may have been fabricated. NOx emission costs are often cited by generators as one of the principal cause of the California power crisis. New evidence, however, suggests that Dynegy, together with AES and others, entered into a series of trades of NOx credits in July and August 2000 by which Dynegy would sell a large quality of credits and then simultaneously buy back a smaller quantity of credits at a higher per credit price. The net effect of the transactions was that virtually no money changed hands, but Dynegy effectively gave to AES and its other counterparties free credits. The trader also resulted in the reporting of a sale at an inflated price, increasing the apparent cost of NOx credits, and, therefore, the apparent marginal cost of electric energy. Additional investigation is needed to determine the full extent and effect of this behavior.

This evidence, while substantial and compelling, is just the tip of the iceberg. As this investigation has shown, there is a snake under almost every rock one turns. But the limitations in this 100-day process have made it impossible to discover the full extent of seller misconduct or to determine each and every wrongdoer or wrongful act.[8] Our findings here are representative, not exhaustive. And false statements by sellers before Congress, in the PA02-2 investigation, and elsewhere have made the process more difficult.[9] The California Parties

[8] For example, as the Commission knows from its Staff investigation in Docket No. PA02-2-000, much of the critical evidence is contained in recordings of trader phone lines. The California Parties were denied access to existing transcripts and notes of such recordings, and due to seller recalcitrance and the limits of time, the California Parties were only able to review a small fraction of the tapes to which the Discovery Master ruled that they were entitled.

[9] For example, Reliant's representation to the ISO Board on June 28, 2000, its testimony before Congress on September 11, 2000 and on April 11, 2001. and its November 22, 2000 submission to this Commission have all been proven either inaccurate or at minimum, grossly misleading in light of the
(continued)

proposed the 100-day discovery period as a first step to determine whether the evidence developed warranted additional procedures.[10] The evidence of seller market manipulation uncovered in this proceeding, together with the publicly disclosed revelations -- from the Enron pleas to the Reliant settlement -- that have continued to mount, are sufficient to warrant a full remedy. But, if the Commission believes that more evidence is needed, it must institute additional procedures.

As the evidence shows, the wrongful conduct of sellers, taken together, drove prices to extraordinary levels that bore no relationship to market fundamentals or to the prices that would have resulted if applicable tariffs and market rules had been followed. In the single-price auctions run by the ISO and PX, it is not possible to isolate the harmful effects of any one violation or any one bad actor. When sellers withhold supply from the day-ahead market, not only do day-ahead prices increase, but the ISO is required to purchase more reserves. Congestion games not only increase transmission costs, but they also increase zonal energy prices. Withholding of generation by multiple sellers, through multiple withholding strategies, acts jointly to drive up market-clearing prices for energy and Ancillary Service and creates the need for out-of-market (OOM) calls.

Likewise, the panic and chaos created in the ISO and PX bid-based markets by seller withholding and manipulation directly resulted in higher prices for ISO out-of-market purchases. Sellers refused to sell power for only the hour needed and began to demand terms for out-of-

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Commission's recent conclusion that Reliant managers deliberately withheld generating capacity to manipulate prices in June 2000.

[10] *See, e.g., Motion for Discovery Order to Implement the August 21st Order from the U.S. Court of Appeals for the 9th Cir. Allowing the Cal. Parties to Adduce Additional Evidence* at 2, filed in Docket Nos. EL00-95-000, *et al.* (Sept. 6, 2002).

market sales of greater than twenty-four hours or arranged more than twenty-four hours in advance; alternatively, sellers demanded extortionate energy exchange ratios. Furthermore, these same manipulative seller strategies served to drive up the price of power bought by the State through CERS after the PX went bankrupt and the ISO was no longer creditworthy. (This is all without considering the impact of these strategies on forward prices, which is beyond the scope of this proceeding, but was a prime motivator for many of the sellers' practices, as the Reliant transcripts released by the Commission show.)

As a result, this conduct cannot be remedied on a piecemeal basis. The only rational and meaningful remedy is one akin, albeit on a broader scale, to that which the Commission already ordered for the October 2, 2000 through June 20, 2001 period. That is, the market-clearing prices for the period from May 1, 2000 through June 20, 2001 must be reset to the level they would have found had the market's rules been obeyed and the markets not been manipulated. This remedy should apply to all spot market sales in the ISO and PX, even if the seller was able to coerce the ISO into out-of-market sales of as much as one month or into energy exchanges rather than sales for cash. It should also apply to all such sales to CERS, as CERS was filling the role originally filled by the PX or responding to sellers' refusals to sell to the ISO. Just as the Commission found in the *July 25th Order*, because all sellers charged excessive rates through the ISO and PX single-price auctions, "it is fair that all those who benefitted from this market also bear responsibility for remedying any potential unlawful transactions that might have occurred in the market."[11] Here, too, the conduct was pervasive, systematic, and unjustly enriched all sellers. The California Parties calculate that the amount of such overcharges by sellers exceeds $7.5 billion, and may be much higher.

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[11] *San Diego Gas & Elec. Co.,* 96 FERC ¶ 61,120 at 61,513 (2001) (*July 25th Order*).

A just remedy will restore sellers and buyers alike to where they would have been in a properly and lawfully functioning market. The California Parties ask no more and no less.

II. THE COMMISSION HAS BOTH THE LEGAL AUTHORITY AND THE LEGAL DUTY TO REMEDY RATES AND CHARGES THAT VIOLATE THE FEDERAL POWER ACT BOTH BEFORE AND AFTER OCTOBER 2, 2000

The Commission has recognized since November 1, 2000 that it has authority to order refunds for all unjust and unreasonable rates in the California spot markets charged on or after October 2, 2000, whether charged by investor-owned or publicly-owned utilities.[12] The Commission's prior findings, together with the evidence presented herein, plainly establishes that rates were far above just and reasonable levels. This is so for prices in the ISO and PX bid-based spot market, as well as for ISO OOM purchases and exchanges. It is also true for purchases by CERS acting in place of the PX for purposes of day-ahead procurement and in place of the ISO, at times, for OOM purchases. Thus, the Commission's authority to remedy unjust and unreasonable rates charged on or after October 2, 2000 in California's spot markets is firmly established.

It is also clear, under the facts of this case, that the Commission possesses the authority to remedy excessive charges for the period from May 1, 2000 through October 1, 2000. Indeed, in response to the pervasive fraud, the abusive use of market power, the violations of filed tariffs, and the other instances of misconduct by sellers in the California electricity market prior to October 2, 2000, the Commission must order remedies that fully address the harm done to consumers. There are two bases for such relief. First, the Commission may remedy all violations of the ISO and PX Tariffs and of the sellers' market-based rate tariffs as well as other

[12] *See, e.g., San Diego Gas & Elec. Co.,* 93 FERC ¶ 61,121 (2000) (*November 1st Order*); *July 25th Order*.

applicable legal requirements. These tariff violations include both direct violations of express tariff terms as well as any other acts of bad faith and dishonesty. Second, under the facts presented, the Commission may order equitable relief to prevent unjust enrichment by sellers.

A. The Commission Has Authority to Remedy Tariff Violations, Including Both Direct Violations of Express Tariff Provisions and Acts of Bad Faith or Dishonesty Carried Out under the Tariff

As the Commission has recognized, it has the power to order refunds for past periods where the rates charged were contrary to the filed rate.[13] Remedies based on such tariff violations are not subject to limits on retroactivity.[14] As shown herein, there are numerous instances of direct violations of sellers' market-based rate tariffs and those of the ISO and PX. These must be remedied.

The Commission has broad authority in this regard.[15] Tariff violations are not limited to misapplications of the explicit terms of the rate schedule -- although such violations, in this case, are manifold. Fraud, anticompetitive conspiracies, and other such wrongful conduct are tariff violations as well. The exercise of market power can not be countenanced simply because a rate schedule fails to include the words "no fraud or market manipulation allowed."

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[13] *San Diego Gas & Elec. Co. v. Sellers of Energy,* 102 FERC ¶ 61,164 P 12 (2003) ("the Commission does have remedial authority to address any tariff violations that occurred prior to [October 2, 2000]"); *accord November 1st Order* at 61,381, *citing Appalachian Power Co.*, 23 FERC ¶ 61,032 at 61,088 (1987). The Commission also may order refunds as a remedy to correct legal errors. *November 1st Order* at 61,381; *United Gas Improvement Co. v. Callery Properties, Inc.,* 382 U.S. 223, 229 (1965) ("An agency, like a court, can undo what is wrongfully done by virtue of its order").

[14] *See Montana-Dakota Util. Co. v. Northwestern Pub. Serv. Co.*, 341 U.S. 246, 251 (1951) (one "can claim no rate as a legal right that is other than the filed rate, whether fixed or merely accepted by the Commission").

[15] *See July 25th Order,* 96 FERC at 61,507-08 n.40 (recognizing authority to remedy tariff violations but stating that "it has not been demonstrated that any conditions or limitations of sellers' market-based rate tariffs have been violated").

The obligations of honesty in fact and fair dealing are implicit in the ISO and PX Tariffs. The Uniform Commercial Code (UCC)[16] and California law impose the obligation of good faith which, in the case of a "merchant," means "honesty in fact and the observance of reasonable commercial standards of fair dealing in the trade."[17] The UCC standard applies to sales of electricity in California[18] and sellers in this case are merchants under the UCC.[19] Moreover, both the ISO and PX Tariffs require that they be governed by, and construed in accordance with, the laws of California.[20] Because the obligation of good faith applies to commercial transactions in competitive markets in California, it should apply with the same force to sales under Commission-approved tariffs that incorporate California law.

Indeed, the Ninth Circuit found that anticompetitive price postings by oil companies, as part of a contractual price-setting mechanism, although not barred by the explicit terms of their agreements, would be a breach of the duty of good faith imposed by the UCC (California

[16] UCC § 1-203; Calif. Commercial Code § 1203.

[17] UCC § 2-103(b) (emphasis added); Calif. Commercial Code § 2103(b). *See* Restatement (Second) of Contracts § 205, comment a. (1981) ("Good faith performance or enforcement of a contract emphasizes faithfulness to an agreed common purpose and consistency with the justified expectations of the other party; it excludes a variety of types of conduct characterized as involving 'bad faith' because they violate community standards of decency, fairness or reasonableness").

[18] *Puget Sound Energy, Inc., v. Pacific Gas and Electric Co.,* 2002 U.S. Dist. LEXIS 1350 (N.D. CA 2002) (UCC applies to sales and exchanges of electricity under California law); *see also, Minnesota Power & Light Co.,* 52 FPC 617 (1974) (UCC standards apply to the interpretation of contracts for the sale of electricity).

[19] UCC § 1-104(1); Calif. Commercial Code § 2104(1). ("'Merchant' means a person who deals in goods of the kind or otherwise by his occupation holds himself out as having knowledge or skill peculiar to the practices or goods involved in the transaction or to whom such knowledge or skill may be attributed by his employment of an agent or broker or other intermediary who by his occupation holds himself out as having such knowledge or skill").

[20] California Independent System Operator Operating Agreement and Tariff, § 20.7; California Power Exchange Corp., PX Operating Agreement and Tariff § 15.6.

Commercial Code § 1203).[21] As that case suggests, the obligation of good faith is especially important in the context of prices intended to reflect a competitive market.[22]

The tariffs of the ISO and PX are complex and designed to anticipate a number of market scenarios. These circumstances provided unscrupulous sellers with opportunities to achieve and conceal improper price increases through market manipulation. In many cases, sellers violated explicit provisions; however, acts of fraud and gaming that increased prices above competitive levels, even if not violations of express tariff provisions, violated the implied obligations of good faith and fair dealing and are therefore tariff violations in and of themselves. [23]

In short, the Commission's authority to remedy tariff violations includes not only express violations of express tariff provisions but also includes all wrongful conduct committed in bad faith by sellers in perpetrating the California power crisis.

B. The Commission Has Authority to Order Equitable Remedies to Prevent Unjust Enrichment Where Sellers Have Defrauded the Commission and Exercised Market Power

Section 309 of the FPA provides the Commission with power to "perform any and all acts," and to issue such rules and orders as it finds "necessary or appropriate" to carry out the provisions of the FPA.[24] Thus, in addition to its authority to remedy tariff violations, the Commission has broad authority to order equitable remedies, including disgorgement of unjust

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[21] *Cal. v. Chevron Corp.,* 872 F.2d 1410 (9th Cir. 1989), *cert. denied,* 493 U.S. 1076 (1990).

[22] *See also, Cal. Lettuce Growers, Inc. v. Union Sugar Co.*, 45 Cal. 2d 474, 289 P.2d 785 (1955) (duty of good faith applied to contractual right to fix price for sugar beets).

[23] Moreover, sellers' actions also constitute a violation of the obligation -- imposed by the orders granting market-based rate authority -- to file promptly changes in "status." Such status changes include departures from the characteristics relied upon by the Commission in approving market-based pricing -- in this case, the implied characteristic of honesty in market dealings.

[24] 16 U.S.C. § 825h (2000).

enrichment, when sellers commit fraud and exercise market power. "[T]he Commission has broad authority to fashion equitable remedies in a variety of settings."[25]

Section 205 (a) of the FPA requires that "[a]ll rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission . . . shall be just and reasonable," and declares "unlawful" any rate or charge that is not just and reasonable, while Section 205 (b) forbids "undue prejudice or disadvantage" to any customer or group of customers.[26] These requirements must be administered by the Commission with due regard for its statutory responsibility to protect consumers.[27] Where prices paid to sellers are shown to be excessive as a result of market power, fraud, and other misconduct, the Commission has the power and the duty to set things right.

Both the Commission and the courts interpret FPA Section 309 (and the corresponding Section 16 of the Natural Gas Act (NGA), 15 U.S.C. § 717o (2000)), to confer on the

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[25] *Transcontinental Gas Pipe Line Corp. v. FERC,* 998 F.2d 1313, 1323 (5th Cir. 1993), *quoting Columbia Gas Transmission Corp. v. FERC,* 750 F.2d 105, 109 (D.C. Cir. 1984). *See also, Mesa Petroleum Co. v. FPC,* 441 F.2d 182, 186 (5th Cir. 1971) (FPC had authority to take corrective actions).

[26] 16 U.S.C. §§ 824d (a), (b).

[27] The Commission's duty to consumers is well established. *FPC v. Sierra Pacific Power Co.,* 350 U.S. 348, 355, (1956) ("the protection of the public interest, as distinguished from the private interests of the utilities, is evidenced by the recital in § 201 of the Act that the scheme of regulation imposed is 'necessary in the public interest.'"); *Maine Public Service Company v. FPC,* 579 F.2d 659, 664 (1st Cir. 1978) ("The primary purpose of this mechanism is to protect consumers from excessive rates and charges -- any protection received by a utility is incidental"). *See also*, *FPC v. Louisiana Power & Light Co*., 406 U.S. 621, 631 (1972) (interpreting parallel sections of the NGA and holding that the NGA "granted FPC broad powers 'to protect consumers against exploitation at the hands of natural gas companies'" and that Congress meant to create a system that would leave "no 'gaps' for private interests to subvert the public welfare") (internal quotations and citations omitted); *United Distribution Cos. v. FERC*, 88 F.3d 1105, 1122 (1996) (interpreting parallel sections of the NGA and holding that the "overriding purpose" of the NGA "is 'to protect consumers against exploitation at the hands of natural gas companies'") (internal quotations and citations omitted), *cert. denied*, 520 U.S. 1224 (1997).

Commission the authority to require refunds where a seller has collected charges in excess of the just and reasonable level, either by error or through the exercise of market power. For example, in Order No. 637-A the Commission addressed the issue of its ability to remedy the possible abuse of market power by sellers in short-term natural gas release transactions.[28] Rejecting a call to make such sales subject to refund, the Commission stated that it could exercise its equitable power under Section 16 of the NGA:

> [A]n across-the-board refund condition is not necessary because, should the Commission determine in an individual case that a releasing shipper has abused its market power, the Commission has the authority under Section 16 of the NGA to take appropriate remedial action that can include remedies to prevent unjust enrichment.[29]

Courts have long recognized the broad scope of the Commission's equitable authority to "set things right" when acting within the scope of its responsibilities. In *Niagara Mohawk Power Corporation v. FPC*, the court considered a Federal Power Commission (FPC) order addressing the failure of a utility to apply for licenses before constructing dams.[30] The FPC issued the licenses but backdated them, thereby effectively requiring the utility to pay license fees for the period during which it should have had licenses, but did not.[31] The D. C. Circuit upheld the order:

> The case presents no question of Congressional power, but only a question of construction of the scope of administrative discretion entrusted to respondent Commission under the [Federal

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[28] *Regulation of Natural Gas Transmission Services and Regulation of Interstate Natural Gas Transportation Services,* FERC Stats. & Regs. ¶ 31,099 (2000) (Order No. 637-A), *generally aff'd, Interstate Natural Gas Assn. v. FERC*, 285 F.3d 18 (D.C. Cir. 2001).

[29] *Id.* at 31,572.

[30] 379 F.2d 153 (D.C. Cir. 1967).

[31] *Id.* at 155.

> Power] Act. The Commission's authority to establish effective dates of licenses earlier than the date of issuance, while not expressly set forth in the Act, is fairly implied, assuming reasonable exercise of the authority. The Act is not to be given a tight reading wherein every action of the Commission is justified only if referable to express statutory authorization. On the contrary, the Act is one that entrusts a broad subject-matter to administration by the Commission, subject to Congressional oversight, in the light of new and evolving problems and doctrines.[32]

Subsequent cases have confirmed the Commission's power to take equitable action to restore the status quo and to prevent unjust enrichment. In *Mesa Petroleum Company v. FPC*, the Court of Appeals upheld an FPC order that required a gas supplier to "return" to a purchaser the difference between what the purchaser would have paid under its contract with the supplier and the amounts it actually had to pay for replacement gas when the supplier abandoned the contract without Commission approval.[33] And in *Louisiana Public Service Commission v. FERC,* the D.C. Circuit again noted that "[t]he Commission's authority to order refunds of amounts improperly collected in violation of the filed rate derives from FPA § 309."[34]

The California electricity crisis and the fraud and market manipulation by sellers are unlike anything ever seen by the Commission or its predecessor. As shown by the evidence produced herein, the misconduct of sellers deserves a comprehensive remedy. The Commission's previous approval of sellers' market-based rates should not -- and as shown herein does not -- give sellers

[32] *Id.* at 158 (emphasis added).

[33] 441 F.2d at 186.

[34] 174 F.3d 218, 224 n.6 (D.C. Cir. 1999) (internal citations omitted); *see also, Coastal Oil & Gas Corp. v. FERC*, 782 F.2d 1249, 1253 (5th Cir. 1986) (agency cannot impose penalty, but is not otherwise limited in devising a remedy to restore the status quo ante); *Columbia Gas Transmission Corp. v. FERC*, 750 F.2d at 109 (the "Commission has broad authority to fashion remedies so as to do equity consistent with the public interest"); *Cox v. FERC*, 581 F.2d 449, 451 (5th Cir. 1978) (upholding remedy requiring that seller return a volume of gas to the interstate market equal to the volume it had diverted to intrastate sales).

the right to commit fraud or to wantonly exercise market power. Otherwise sellers will benefit from their own egregious conduct.[35] It is, rather, by requiring sellers to return amounts that they were never entitled to charge that the Commission can enforce the filed rate doctrine.

The Commission has authority under Section 309 of the FPA to order equitable relief to set things right in the California markets for periods before October 2, 2000. This authority is in addition to the Commission's authority to remedy tariff violations. The facts presented here demand that the Commission exercise all of its authority to provide a full remedy for the egregious conduct of sellers and the previously unimaginable harm that was inflicted on buyers.

III. PROPOSED FINDINGS OF FACT

A. Prices in the ISO and PX Spot Markets Were Unjust and Unreasonable

Proposed Finding of Fact: Prices in the ISO and PX spot markets from October 2, 2000 through June 20, 2001 were unjust and unreasonable to the extent they exceeded the Mitigated Market Clearing Price.

In its *November 1st Order*, the Commission found that the electric market structure and market rules for wholesale sales of electric energy in California were seriously flawed and that these structures and rules, in conjunction with an imbalance of supply and demand in California, had caused, and continued to have the potential to cause, unjust and unreasonable rates for short term energy and Ancillary Services under certain conditions.[36] In its *December 15th Order*, the Commission reaffirmed these findings but added that it "did not find that all rates, at all times, were unjust and unreasonable in these spot markets" nor did it find "that any individual sellers

[35] The Supreme Court has reserved judgment on the question of whether the filed-rate doctrine applies in the case of fraudulent conduct. *See Arkansas Louisiana Gas Co. v. Hall,* 453 U.S. 571, 583 n.13 ("We save for another day the question of whether the filed rate doctrine applies in the face of fraudulent conduct"); *Montana-Dakota*, 341 U.S. at 253 ("We need not decide what action the Commission is empowered to take if it believes that a fraud has been committed on itself").

[36] *November 1st Order,* 93 FERC ¶ 61,121.

exercised or abused market power."[37] The Commission stated, however, that "there are several indicators of potential market power which we will closely scrutinize for future sales, including: the outage rates of the seller's resources, the failure to bid unsold MWs into the ISO's real-time market, and the variations in bidding patterns for the same or similar resources."[38]

The new evidence that has come to light since the Commission made those findings has changed the landscape. From the Commission's discovery of the Enron trading strategies memo and the subsequent guilty pleas of two of Enron's top traders to charges of manipulating the California markets through fraud, to the admissions of gas index fraud and round-trip trading in gas and electricity, to the discovery of the false outage and withholding schemes of AES, Williams, and Reliant, the new revelations have continued to mount. Judge Birchman found, after more than a year of hearing procedures, that prices charged in ISO and PX spot markets from October 2, 2000 through June 20, 2001 exceeded the maximum just and reasonable price established by the formula in the Commission's *July 25th Order* by $1.8 billion, even when applying the now-discredited California border gas index. And, in this filing, the California Parties present overwhelming evidence as to the very areas that the Commission stated on December 15, 2000 were relevant to determining whether sellers exercised market power: "outage rates of the seller's resources, the failure to bid unsold MWs into the ISO's real-time market, and the variations in bidding patterns for the same or similar resources."[39]
Drs. Reynolds and Hanser analyze seller outages and outage rates and conclude (as discussed further in Section III.B., below) that the major generators withheld substantial amounts of

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[37] *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,294 at 61,998 (2000) (*December 15th Order*) .

[38] *Id*.

[39] *Id*.

generation from the market to create false scarcity, drive up prices, and keep the ISO in a perpetual state of panic as it scrambled to find the power needed to keep the lights on. Drs. Reynolds and Berry further determine that many major sellers systematically failed to bid an enormous amount of their available supply into the real-time market. Drs. Berry, Hanser, and Stern show that sellers submitted bids in the PX and ISO markets that were wholly unrelated to the units' costs or operating characteristics and the only purpose of which was to force customers into the real-time market and increase prices far above competitive levels. And this evidence is only part of the full picture of seller conduct; the evidence now presents a picture of a market that was manipulated in every imaginable way through the individual and joint action of a network of sellers both large and small, public and private.

Based on the record as it now stands, there is no longer need for equivocation as to whether prices were "potentially" unjust and unreasonable and only so "under certain" undefined conditions. As to the period from October 2, 2000 through June 20, 2001, the evidence establishes beyond doubt that prices in the ISO and PX spot markets were unjust and unreasonable to the extent they exceeded the Mitigated Market Clearing Price (MMCP). The Commission should make this finding explicit to further support the refund remedy already adjudicated.

B. To Varying Degrees, the Five Major California Independent Generators Withheld Capacity From the Market To Drive Up Market Prices

Proposed findings of fact: AES/Williams, Dynegy, Mirant, and Reliant engaged in the deliberate and systematic withholding of energy and Ancillary Services from the market during the period from May 1, 2000 through June 20, 2001. Duke also did so beginning in late November 2000. This conduct drove prices significantly above competitive levels by artificially reducing supply.

Generator withholding was carried out in several discrete ways:

1. The evidence establishes that each of The Big 5 generators falsely reported units as being out of service when they were actually available for service.

> Specific evidence shows that in at least fourteen incidents spanning about thirty days, AES/Williams, Duke Energy, Dynegy, Mirant, and Reliant reported to the ISO that generating units were unavailable due to required maintenance or repairs or other limitations when internal records show that the units were, in fact, available. Eight of these incidents occurred during ISO-declared system emergencies.
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> 2. The amount of no-bid withholding by generators exceeded 500 MW during on-peak hours in virtually all months and exceeded 1,000 MW in some months. Such failures to bid capacity can drive up prices and reflect the exercise of market power. This withholding behavior occurred during numerous system emergencies.
>
> 3. Generators engaged in economic withholding through aggressive bidding. Such bids greatly exceeded the underlying costs of generation and were intended to price the bidder out of the market and drive prices significantly above competitive levels. Spiked bids were very frequent in the summer of 2000, and they were particularly common during system emergency periods declared by the ISO. Williams, Dynegy, Mirant, Reliant and importing suppliers regularly engaged in economic withholding strategies.
>
> 4. There were more than twenty instances in which the records of Dynegy, Mirant, and Reliant show that they placed their units on "reserve shutdown." meaning that they shut the plant down for economic reasons, during times when the ISO had declared a system emergency, and thus kept them out of the market even though they were operable. AES/Williams did not keep records of reserve shutdown events.

1. Overview of withholding

The evidence of withholding in this case is compelling.[40] By systematically withholding portions of their capacity to produce electric power and energy, the major generators injured the California electricity markets, raising prices, and hampering operations by the ISO. As the Commission has recognized, withholding is one of the ways in which unscrupulous firms exercise market power:

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[40] Withholding is the failure to produce energy from capacity that is capable of economically providing energy at the prevailing market prices. Prepared Testimony of Robert J. Reynolds Ph.D., Exh. No. CA-5 at 4:13-19 (Reynolds Testimony). As defined by Dr. Reynolds, withholding also includes the failure to commit to produce energy via Ancillary Services. Withholding generally has a direct effect on market prices: *i.e.,* withholding increases market prices. *Id.*

> Anticompetitive behavior or exercises of market power include behavior that raises the market price through physical or economic withholding of supplies.[41]

Individually and collectively, the generators benefited from the higher price levels that resulted from withholding. However, withholding was not an isolated phenomenon; generators used withholding in conjunction with other tactics and strategies to exercise market power and manipulate prices to their advantage.

The specific types of withholding practices varied, but included:

1. Providing false or misleading outage information;
2. Withholding from the ISO's real-time markets by submitting bids far above marginal costs or by not bidding at all;
3. Declaring units out of service for claimed economic reasons during ISO-declared system emergencies; and
4. Withdrawing supply from the day-ahead market through a variety of operational and trading strategies.

The evidence amassed to date -- based on analyses of the generators' actual operating and bidding practices -- shows that withholding occurred in California during the crisis period at levels that can only be explained as exercises of market power. And a close look at the facts of particular outages reveals many instances of deception by generators in making generating

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[41] *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations,* 97 FERC ¶ 61,220, 61,976 (2001). The Commission went on to explain that "Such behavior may involve an individual supplier withholding supplies, or a group of suppliers jointly colluding to do so. Physical withholding occurs when a supplier fails to offer its output to the market during periods when the market price exceeds the supplier's full incremental costs. For example, physical withholding would occur when a generator declares a forced outage when its unit is not, in fact, experiencing mechanical problems, and when the market price is above the unit's full incremental costs. Economic withholding occurs when a supplier offers output to the market at a price that is above both its full incremental costs and the market price (and thus, the output is not sold). For example, we would expect that, during periods of high demand and high market prices, all generation capacity whose full incremental costs do not exceed the market price would be either producing energy or supplying operating reserves. Failing to do so would be an example of economic withholding." *Id.*

capacity unavailable. This comes as no surprise; the Commission already has reviewed specific instances of withholding in the California market:

- Reliant: Reliant raised prices by reducing, by about 1,000 MW, the amount of power offered to the PX on a day-ahead basis below the amount that normally would have been offered.[42] Confronted with evidence of this violation by Commission Staff, Reliant agreed to a settlement. Although the withholding allegations involved only two days -- June 21 and June 22, 2000 -- the settlement requires independent audits of future outages to determine their legitimacy.[43]

- AES/Williams: The unavailability of must-run generating units owned by AES in southern California led to an investigation and ultimately a settlement agreement between Williams, AES, and the Commission's Enforcement Staff. Because of the units' unavailability, the ISO had to dispatch power from other units, also owned by AES, where the power was significantly more expensive, such that AES and Williams made larger profits.[44] Williams agreed to a refund of $8 million in connection with that case.[45]

Incidents similar to Reliant's intentional withholding of supply on June 20-21, 2000 were common throughout the summer of 2000, and during the high-priced periods that followed. The generators removed units from service for false or purely strategic reasons, sometimes during declared emergencies. All of the generators understood the impact of outages on market prices. As an AES employee noted in the a control operator log, "Note: Price on PX went up after we came down."[46]

[42] *Fact Finding Investigation into Possible Manipulation of Electric and Natural Gas Prices,* 102 FERC ¶ 61,108 (2003), *Fact Finding Investigation*.

[43] *Id.* ([Remedies ¶ 4]).

[44] *AES Southland, Inc., Williams Energy Marketing & Trading Co.,* 95 FERC ¶ 61,167 (2001).

[45] *Id.*

[46] Exh. No. CA-154.

2. Overview of new testimony and evidence

For the California Parties, the testimonies of Drs. Hanser[47] and Reynolds,[48] together with the testimonies of Drs. Berry[49] and Fox-Penner,[50] address aspects of the withholding issue. These experts analyze the generators' actual bidding and operating behavior, together with their internal records and their reports to the ISO to determine the extent of any withholding and to assess outage claims. For example, Dr. Reynolds shows that, even if one accepts the generators' reported outages as being legitimate, withholding by the major generators in California during the power crisis was so significant -- averaging 1,000 MW during many peak hours in the summer of 2000 -- that it equaled the amount the Commission found shocking as to Reliant on just two days.[51] Four of the five major California generators -- Williams, Dynegy, Mirant, and Reliant -- frequently withheld economic supply from the market, offered it at prices far above estimated marginal cost based on their market positions, withheld bids during ISO-declared system emergencies, and raised bids during high-demand periods and emergencies to take advantage of those conditions to artificially restrict supply further and raise prices.[52] Dr.

[47] Prepared Testimony of Dr. Philip Hanser, Exh. No. CA-9 (Hanser Testimony) and Hanser Appendices, Exh. No. CA-10.

[48] Reynolds Testimony, Cal Exh. No. 5 and Reynolds Appendices, Exh. No. CA-6.

[49] Prepared Testimony of Dr. Carolyn Berry, Exh. No. CA-7 (Berry Testimony) and Berry Appendices, Exh. No. CA-8.

[50] Prepared Testimony of Dr. Peter Fox-Penner, Exh. No. CA-1 (Fox-Penner Testimony) and Fox-Penner Appendices, Exh. No. CA-2.

[51] Reynolds Testimony, Exh. No. CA-5 at 84-96; *compare, Fact Finding Investigation*.

[52] Reynolds Testimony, Exh. No. CA-5 at 83:13-21.

Reynolds concludes that such substantial withholding is evidence that the generators had market power and exercised that power.[53]

But there are good reasons not to accept the generators' reported outages as being legitimate. Dr. Hanser shows that the forced outages reported by the generators were significantly higher than a national benchmark group of comparable units during the second half of 2000.[54] Dr. Hanser also reviewed information on generators' individual outage claims, to the extent such information was made available (and as the time allowed) in the last 100 days. He finds, for example, that on August 15, 2000, Williams reported to the ISO that AES's Alamitos 7 Unit was unavailable due to NOx limitations, when AES's real-time plant logs from that day show the plant was shut down because Williams directed that it be.[55] Reliant failed to return its Etiwanda Unit 2 to service for two days after repairs were completed on January 26, 2001, even though the ISO system was experiencing continuous Stage 3 emergencies.[56] The evidence demonstrates that some forced outage events reported by the generators were not legitimate. Withholding also was accomplished by not submitting bids and by submitting high bids. Dr. Berry discusses the generators' attempts to raise prices by withholding supply in combination with bidding strategies.[57] These strategies were designed to price the bidder out of the market.[58]

[53] *Id.* at 3:11-12, 9:1-6.

[54] *See* Hanser Testimony, Exh. No. CA-9 at 15. Dr. Hanser's analysis shows that the benchmark forced outage rates were 57 percent of the rates reported by the California generators for the steam turbine units. This percentage is calculated on a capacity-weighted average basis using the EFORP/NCF measure reported by Dr. Hanser. *Id.* at 13.

[55] *See id.* at 22; Hanser Appendices, Exh. No. Ca-10 at 21.

[56] *See* Hanser Testimony, Exh. No. CA-9 at 28:11-29:2.

[57] Berry Testimony, Exh No. CA-7 at 9:1-11.

[58] *Id.* at 5:5-8:5.

Another generator tactic was to limit supply through declarations of reserve shutdowns during system emergencies. Dr. Hanser details some instances in which the records of Dynegy, Mirant, Reliant, and to a lesser extent Duke show that they placed their units on "reserve shutdown," meaning that they shut the plant down for economic reasons, during times when the ISO had declared a system emergency; these generators thus kept their units out of the market even though they were operable.[59] Dr. Fox-Penner describes how withholding and many of the manipulative trading strategies were interrelated, each building on the other. The specific evidence on four types of withholding is discussed below.[60]

3. False outage withholding

Dr. Reynolds shows that there were significant levels of withholding during the crisis period.[61] He shows that, even assuming that the generators' reported outages were legitimate, withholding by month during on-peak hours exceeded 1,000 MW in about forty percent of the time periods during June to September 2000, and only slightly less during the fall.[62] During this Summer 2000 period, such withholding exceeded 2,000 MW in about fifteen percent of all peak

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[59] Hanser Testimony, Exh. No. CA-9 at 6:9-21. AES did not provide data on reserve shutdown events. *Id.* at 33 fn. 28.

[60] Fox-Penner Testimony, Exh. No. CA-1 at 25-34.

[61] Reynolds Testimony, Exh. No. CA-5 at 84-96.

[62] Reynolds Testimony, Exh. No. CA-5 at 84-86. Dr. Reynolds indicates that the generators own 78 generating units in California with total capacity of about 17 gigawatts. *Id.* at 28:2-9.

period hours.[63] The levels of withholding were highest in June through September of 2000, but were also significant in other months.[64]

The outages reported by the California generators were much higher than expected, suggesting that some generators declared their generating units out of service simply in order to withhold their capacity from the market. The benchmark analysis performed by Dr. Hanser shows that for California natural gas steam turbine units and natural gas combustion turbine units, outage rates were very high, compared to the national benchmark in the summer of 2000 through the summer of 2001.[65] The benchmark analysis also demonstrates that in the second half of 2000, California generating units were going off-line more often than were the benchmark units even when the level of utilization is taken into account.[66]

Dr. Reynolds also estimated withholding based on Dr. Hanser's analysis of the benchmark forced outage rates. He assumed reported planned outages were legitimate, and used the benchmark for forced outage rates.[67] Dr. Reynolds concludes that the estimated effect of

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[63] Reynolds Testimony, Exh. No. CA-5 at 10:6-12. Even assuming that reported outages were legitimate, Dr. Reynolds concludes that four of the five generators engaged in significant levels of withholding over significant periods of time. The possible exception under this assumption was Duke. *Id.* at 84.

[64] Reynolds Testimony, Exh. No. CA-5 at 11.

[65] Hanser Testimony, Exh. No. CA-9 at 14:1-7; Hanser Appendices, Exh. No. CA-10 at 52.

[66] Hanser Testimony, Exh. No. CA-9 at 14-15. Hanser Appendices, Exh. No. CA-10 at 50-51.

[67] Reynolds Testimony, Exh. No. CA-5 at 13-14. Dr. Reynolds estimated withholding assuming (a) reported forced outages and (b) no forced outages, and then interpolated between those results based on the ratio of benchmark forced outages to reported forced outages. *Id.* at 96.

excessive forced outage reporting was about 260 MW per hour -- and this is in addition to the 1,000 MW to 2,000 MW of withholding he found in many hours.[68]

Importantly, the evidence shows that some of the representations by generators to the ISO -- that certain outages resulted from equipment failure -- were false and that the seller deliberately withheld the unit even though it was capable of operating. Further, there is evidence that misleading reporting of outages even occurred during ISO-declared system emergency periods, when withholding was most likely to increase prices and jeopardize reliability.[69] In other instances, after an outage event, the generators delayed providing notice to the ISO, thereby extending the outage period. Details of some of these incidents are provided by Dr. Hanser. To summarize:

- <u>AES/Williams' Redondo Beach 6 Unit -- April 3 - April 6, 2000</u>: Although the ISO understood the unit to be on forced outage due to a boiler tube leak, the plant records indicate that this was a planned shutdown. The leak appears to be an excuse that was concocted two days later.[70]

- <u>AES/Williams' Alamitos 7 Unit -- August 15, 2000</u>: The ISO was notified by Williams of a forced outage due to NOx limits. However, this was not a forced outage as the control operator log indicates that the unit was taken off line at Williams' request after Williams told the ISO it was a forced outage. Williams, in a deposition, admitted that NOx limitations do not constitute a valid basis for a unit outage under its agreement with AES. Much of this incident occurred during a Stage 2 System Emergency.[71]

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[68] *Id.* at 14. (Dr. Reynolds states that this represents an increase of about thirty percent over the estimated withholding assuming all reported forced outages were legitimate).

[69] False declarations by generators of plant outages are especially problematic because of the reliability implications (particularly during emergency conditions) and because such declarations can serve as an implicit signal aimed at affecting the behavior of other participants.

[70] Hanser Testimony, Exh. No. CA-9 at 22:7-18; Hanser Appendices, Exh. No. CA-10 at 20.

[71] Hanser Testimony, Exh. No. CA-9 at 22; Hanser Appendices, Exh. No. CA-10 at 21.

- Dynegy's El Segundo 1 Unit -- August 30 - September 3, 2000: According to ISO records this was a scheduled outage for repairs; however, the repairs already had been done and the unit was simply shut down because of the level of market prices.[72]

- Mirant's Pittsburg 1 Unit -- October 18 - October 22, 2000: Although Mirant declared to the ISO that the unit was on forced outage due to an external tube leak, the outage event ended on October 20 and the unit was thereafter on reserve shutdown. Mirant waited two days to notify ISO about the end of the outage.[73]

- Reliant's Etiwanda 1 Unit -- November 14 - November 16, 2000: Reliant notified the ISO that the unit was on forced outage, while plant records indicate the plant was on reserve shutdown between November 3 and 16, including the ISO-declared system emergencies on November 14 and 15.[74]

- Duke's Oakland 1 Unit -- November 20 - November 22, 2000: There was a multi-day delay during ISO-declared emergencies in returning the unit to service after repairs to lube oil cooler and a cooling fan.[75]

- AES/Williams' Redondo 5 Unit -- December 19 -- December 20, 2000: During an ISO-declared emergency, Williams declared a forced outage to this unit due to a boiler tube leak. However, the control operator logs uncharacteristically put quotation marks around the outage reason, "Blr. Tube Leak" and later, after tests were done, the logs indicate that no leaks were found.[76]

- Reliant's Etiwanda 1 Unit -- December 28 - December 30, 2000: ISO records indicate that Reliant declared a forced outage, but internal records and shift supervisor logs fail to confirm an outage, indicating only the units were on stand-by status.[77]

- Reliant's Etiwanda 2 Unit -- December 28 - December 30, 2000: ISO records indicate that Reliant declared a forced outage, although shift

[72] Hanser Testimony, Exh. No. CA-9 at 23:1-17; Hanser Appendices, Exh. No. CA-10 at 22.

[73] Hanser Testimony, Exh. No. CA-9 at 23:19-24:7; Hanser Appendices, Exh. No. CA-10 at 23.

[74] Hanser Testimony, Exh. No. CA-9 at 24:9-21; Hanser Appendices, Exh. No. CA-10 at 24.

[75] Hanser Testimony, Exh. No. CA-9 at 25:1-16; Hanser Appendices, Exh. No. CA-10 at 25.

[76] Hanser Testimony, Exh. No. CA-9 at 25:18-26:7; Hanser Appendices, Exh. No. CA-10 at 26.

[77] Hanser Testimony, Exh. No. CA-9 at 26:9-19; Hanser Appendices, Exh. No. CA-10 at 27.

supervisor logs indicate that work on the Unit 2 East Cooling tower was completed on December 29, not December 30.[78]

- Reliant's Etiwanda 2 Unit -- January 26 -- January 28, 2001: Although a forced outage was ended with the completion of repairs, Reliant did not declare an end to the outage for two days while the ISO system was experiencing Stage 3 System Emergencies.[79]

- Mirant's Pittsburg 1 Unit -- March 20 - March 21, 2001: Mirant delayed by one day returning the unit to service after an outage and during an ISO-declared system emergency. [80]

- Reliant's Ellwood Unit -- April 9 - April 10, 2001: Reliant delayed reporting the end of an outage for more than twelve hours during peak. [81]

- Reliant's Etiwanda 1 Unit -- May 12 - May 14, 2001: A forced outage ended early on May 12, 2001 and, contrary to what Reliant told the ISO, the unit did not continue on forced outage through May 14, but rather was in reserve shutdown.[82]

- Reliant's Etiwanda 5 Unit -- May 30 - May 31, 2001: Forced outage declared to ISO when other records indicate that the plant was on reserve shutdown during ISO-declared system emergencies.[83]

Other events, while perhaps not "false reports," are very troubling. For example, according to ISO records, Dynegy reported that its El Segundo 1 and 2 units (with a capacity of about 350 MW) were on "forced outage" between November 19 and December 5, 2000 -- including 2 days of ISO-declared system emergencies (November 19 and 20) -- when, in fact, the

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[78] Hanser Testimony, Exh. No. CA-9 at 26:21-27:9; Hanser Appendices, Exh. No. CA-10 at 28.

[79] Hanser Testimony, Exh. No. CA-9 at 27:11-28:2; Hanser Appendices, Exh. No. CA-10 at 29.

[80] Hanser Testimony, Exh. No. CA-9 at 28:4-19; Hanser Appendices, Exh. No. CA-10 at 30.

[81] Hanser Testimony, Exh. No. CA-9 at 28:21-29:8; Hanser Appendices, Exh. No. CA-10 at 31.

[82] Hanser Testimony, Exh. No. CA-9 at 29:10-19; Hanser Appendices, Exh. No. CA-10 at 32.

[83] Hanser Testimony, Exh. No. CA-9 at 29:21-30:10; Hanser Appendices, Exh. No. CA-10 at 33.

units were shut down because Dynegy claimed its operating staff was on vacation.[84] Dynegy thus claimed it was unable to staff the plant for a period of more than two weeks. Forced outages should not include claimed employee vacation days -- particularly during a state-wide power supply crisis.[85] In another questionable instance, Reliant extended a forced outage at its Etiwanda 3 Unit for about two months due to claimed "financial reasons."[86]

4. No-bid withholding

Withholding also can be accomplished by not submitting a bid when the capacity is available and economic at the prevailing market clearing price. This "no-bid" strategy has much the same effect as other types of withholding.[87] Dr. Reynolds measures this type of withholding by AES/Williams, Duke, Dynegy, Mirant and Reliant during the period January 2000 through June 2001.[88] Dr. Reynolds' analysis shows that the California generators frequently did not bid when truly competitive firms would have done so. The amount of no-bid withholding -- that is, the average "un-bid producible capacity"[89] -- exceeded 500 MW during on-peak hours in

[84] Hanser Testimony, Exh. No. CA-9 at 30:12-31:12; Hanser Appendices, Exh. No. CA-10 at 34.

[85] The ISO Tariff defines a forced outage as an outage for which sufficient notice cannot be given to allow the outage to be factored into the Day-Ahead Market or hour-ahead Market scheduling processes. An Outage is defined as either "planned or forced." ISO Tariff, Appendix A. The U.S. Department of Energy, Energy Information Administration, defines "forced outage" as "[t]he shutdown of a generating unit, transmission line or other facility, for emergency reasons or a condition in which the generating equipment is unavailable for load due to unanticipated breakdown." Available at: <http://www.eia.doe.gov/cneaf/electricity/epav1/glossary.html#ef>.

[86] Hanser Testimony, Exh. No. CA-9 at 31:14-32:5; Hanser Appendices, Exh. No. CA-10 at 35.

[87] Reynolds Testimony, Exh. No. CA-5 at 15:1-17.

[88] Dr. Reynolds determines the extent to which the generators did not bid capacity that was available and producible at a marginal cost below the prevailing maximum allowable bid price. *Id.* at 47-51.

[89] Dr. Reynolds uses the term "un-bid producible capacity" to refer to capacity that was not bid and was: (a) not on outage, (b) not on reserve shutdown, (c) not unproducible due to ramping constraints,
(continued)

virtually all months during the relevant period and exceeded 1,000 MW in some months (including June and July 2000).[90] The no-bid phenomenon occurred during ISO-declared system emergencies, as well as at other times. Such failures to bid capacity reflect the exercise of market power. During system emergencies, these failures can result in rolling blackouts, economic harm on a vast scale and danger to human health and safety.

5. High-bid withholding

High-bid withholding occurs when a generator submits bids that are far above the underlying costs of generation and can only be intended to drive prices significantly above competitive levels.[91] Dr. Berry finds that the generators substantially raised or "spiked" the bids for some or all of their generating units on certain days or in certain hours even thought there was no change in underlying costs. This conversation between a Dynegy trader and a Sempra employee occurred on March 19, 2001, a day that the ISO declared a Stage 3 Emergency:

Sempra:	All right. You got 110 dollars?
Dynegy:	Hell, no, dude. We got some frickin' major margin in there.
Sempra:	A lot of other [expletive] going on.
Dynegy:	A couple of hundred bucks margin in there, maybe.
Sempra:	Yeah.
Dynegy:	Maybe 3,400 dollars.[92]

Dr. Berry states that when the ISO is short of capacity, bid price spikes force the ISO to dispatch high priced bids. "During those hours when several large sellers bid price spikes into the real

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and (d) did not have a marginal cost above the maximum allowable bid in the CAISO real-time market. *Id.* at 99.

[90] *Id.* at 101:9-15.

[91] *See* Berry Testimony, Exh. No. CA-7 at 3-15.

[92] Transcript of Mark Chamblee phone line March 19, 2001, Exh. No. CA-101.

time market simultaneously, it is almost inevitable that the ISO will dispatch the spiked energy bids."[93] This bidding strategy was used predominately in May, June, and July 2000.[94] Spiked bids often were preceded by periods when the units were not bid into the market at all even though they were available.[95]

Several of the generators also used hockey stick type bidding, which Dr. Berry measures through an index called "average bid span."[96] This difference between the lower and upper end of the bid for a particular generating unit (stated as a monthly average) exceeded \$200/MWh for many units and even exceeded \$800/MWh in December of 2000 for Dynegy's El Segundo 7 Unit 2.[97] Dr. Berry shows that this pattern of bidding cannot be justified by cost factors.[98] Her conclusion is consistent with Dr. Hanser's analysis, which shows that the generators submitted bids significantly above marginal costs, and that the generators' markups increased significantly with the suppliers' market position (volume of other real-time bids) and as market conditions tightened.[99]

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[93] Berry Testimony, Exh. No. CA-7 at 23:1-8.

[94] *See id.* at 23:9-14.

[95] *See id.* at 29:17-22. 55:5-15.

[96] *Id.* at 12.

[97] *Id.* at 16, Figure 3.

[98] *See id.* at 17-19. For example, Dr. Berry shows that some bid prices in May and June 2000 exceeded costs by at least \$500/MWh and in July 2000 such bid prices exceeded costs by at least \$250/MWh. As she points out, this evidence is borne out by the reaction of sellers to increasingly lower price caps. Many sellers offered their gas-fired units into the real-time market at prices that were less than or equal to the new \$250/MWh price cap in the months of August and September. The fact that sellers were willing to offer this supply into the market at these prices reveals that the costs of production of these units must have been less than or equal to \$250/MWh. There can be no cost-based explanation for bid prices for gas-fired units to be above \$250/MWh in May, June, and July, when they were less than or equal to \$250/MWh in August and September for the same units. *Id.*

[99] Hanser Testimony, Exh. No. CA-9 at 37-39.

Dr. Berry found spiked bids to be very frequent in the summer of 2000, and that they were particularly common during system emergency periods declared by the ISO.[100] Williams, Dynegy, Mirant, and Reliant regularly submitted spiked bids during ISO-declared system emergencies.[101] Importing suppliers also engaged in economic withholding through bidding behaviors. LADWP, BPA, Powerex, and IdaCorp all engaged in these bidding strategies.[102]

6. Reserve shutdowns during system emergencies

Another withholding strategy involves placing or maintaining units on reserve shutdown (shutdown for economic reasons), sometimes during ISO-declared system emergency periods. As explained by Dr. Hanser, the ISO only declares a system emergency when the operating reserves are expected to fall below certain levels; *i.e.*, when total available generation capacity is dangerously close to expected electricity demand.[103] The reserve shutdown tactic kept units out of the market even though they were operable and could have been called by the ISO. Such units were effectively withheld because a unit cannot immediately start generating power when it is on reserve shutdown; start-up and ramp-up processes require some time for the unit to generate at full capacity.[104] It is highly suspicious when a unit is on reserve shutdown when the available generation sources are dangerously low. Dr. Hanser identifies twenty-two instances of this form

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[100] Berry Testimony, Exh. No. CA-7 at 20-24.

[101] *Id.* at 23-24.

[102] *Id. at* 25. Dr. Berry reports that Powerex, which claimed at one point to constitute seventy percent of the real-time market alone, made a regular practice of hockey stick bidding. *Id.* at 100. It also withdrew its power and then entered spiked bids in a manner quite similar to the in-state generators during the summer of 2000. *Id.* at 100-110. LADWP also frequently entered elevated bids during ISO-declared system emergency periods. *Id.* at 116-123.

[103] Hanser Testimony, Exh. No. CA-9 at 19-20; *See also,* Prepared Testimony of Gary S. Tarplee (Tarplee Testimony), Exh. No. CA-17 at 4-5 (discussing system emergencies).

[104] Hanser Testimony, Exh. No. CA-9 at 22 n.25.

of withholding by Dynegy, Mirant, Reliant, and to a lesser extent Duke during ISO-declared system emergency periods.[105]

Withholding also may be accomplished through withdrawing supply from the PX day-ahead market through a variety of operational and trading strategies, as shown by Dr. Fox-Penner. He points out that there is a close symbiosis between market behavior by sellers that profitably withdrew capacity from the California markets, and manipulative trading strategies.[106] Dr. Fox-Penner concludes that the ability of generators to exercise market power through withholding was enhanced by manipulation strategies and manipulation strategies were founded on, and made profitable by, such exercises of market power.[107]

7. Other evidence of withholding

The evidence of withholding presented by the California Parties is consistent with the findings of other important studies.108 And as shown above, the Commission itself already has reviewed compelling evidence of specific instances of withholding in the California market by Williams/AES and Reliant. It is now clear that many different generators exercised market power through withholding to raise prices.

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[105] Hanser Testimony, Exh. No. CA-9 at 34:4-9, Hanser Appendices, Exh. No. CA-10 at 36-38.

[106] Fox-Penner Testimony, Exh. No. CA-1 at 34:25-35:21.

[107] *Id.* at 37:31-38:6.

[108] *See* Exh. No. CA-246, California Public Utilities Commission Staff, *Report on Wholesale Electric Generation Investigation,* Chapter III (Sept. 17, 2002) and *Supplemental Report* (Jan. 30, 2003) (concluding that wholesale generators did not provide energy when it was available during the early portion of the energy crisis of 2000-2001); Exh. No. CA-247, Anjali Sheffrin, "Empirical Evidence of Strategic Bidding in California ISO Real-Time Market" (March 21, 2001) (concluding that physical withholding took place 30 percent of the hours on average for the Sellers during May – November 2000 period).

8. The generators' withholding conduct is an exercise of market power and violates the ISO Tariff

It should go without saying that false outage reporting and other types of withholding to exercise market power and unfairly increase prices violate the ISO Tariff. The ISO Tariff imposes requirements that Participating Generators report outage information to the ISO.[109] The efficient and reliable operation of this complex market system depends on honest involvement, responses, and reporting by generators and other market participants. False or misleading statements by generators to the ISO in connection with outages are violations of the Tariff.

Participating Generators are required by the ISO Tariff to meet all applicable Western Systems Coordinating Council (WSCC) standards.[110] In addition, all market participants must comply with the ISO reliability standards, and procedures, which, in turn, must be at least as stringent as the WSCC and NERC reliability criteria and standards,[111] which require generation to be operated to maximize reliability and avoid emergencies. As Mr. Tarplee explains, the Minimum Operating Reliability Criteria (MORC) in effect in the WSCC in 2000-2001 required, in relevant part, that:

> All generation shall be operated to achieve the highest practical degree of service reliability. Appropriate remedial action will be taken promptly to eliminate any abnormal conditions which jeopardize secure and reliable operation. * * *
>
> The reliable operation of the interconnected power system requires that adequate generating capacity be available at all times to

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[109] ISO Tariff §§ 5.5.1 (Planned Maintenance), 5.5.3 (Forced Outages incorporating § 2.3.3 (Coordination of Outages and Maintenance)), and 5.3 (Identification of Generating Units).

[110] ISO Tariff §5.4. The WSCC is now the Western Electricity Coordinating Council ("WECC").

[111] ISO Tariff § 2.3.1.3.1.

> maintain scheduled frequency and avoid loss of firm load following transmission or generation contingencies.[112]

Mr. Tarplee also explains that MORC emergency operating procedures require that "[t]he affected entity(ies) . . . shall restore the interconnected power system to a secure and reliable state as soon as possible."[113]

These requirements, imposed on Participating Generators by the ISO Tariff, were evaded or violated by generator withholding tactics, by withholding through no-bid or high-bid tactics during system emergencies, by declaring or maintaining generation on reserve shutdown during system emergencies, and by not returning generation to service in a timely manner after outages.

Moreover, no one can claim that withholding was permitted simply because it was not specifically excluded. All market participants were placed expressly on notice that withholding and other market-manipulation strategies were subject to scrutiny after-the-fact and potential remedial action. Both the ISO and PX Tariffs provide for market monitoring to detect and prevent the exercise of market power and other abuses that might undermine the effective functioning or overall efficiency of the markets.[114] The tariffs describe practices that are "subject to scrutiny" and "further action" such as anomalous market behavior (which includes withholding)[115] and gaming.[116] Tariff provisions relating to such practices label withholding and

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[112] Tarplee Testimony, Exh. No. CA-17 at 5-6.

[113] *Id.* at 7.

[114] ISO Tariff 2.6; ISO Market Monitoring and Information Protocol (MMIP) 1.1; PX Tariff 2.5; PX Market Monitoring rules (MMR) 1.1.1.

[115] Anomalous market behavior includes "<u>withholding of Generation capacity under circumstances in which it would normally be offered in a competitive market</u>," "unusual trades or transactions," "pricing and bidding patterns that are inconsistent with prevailing supply and demand conditions," and "unusual activity or circumstances relating to imports from or exports to other markets or exchanges." MMIP 2.1.1.1, 2.1.1.2, 2.1.1.4, 2.1.1.5 (emphasis added); MMR 2.1.1.

gaming as "unfair" and "improper" and acknowledge that anomalous market behavior may reflect the exercise of market power, intentional market manipulation, or other "unacceptable" or "proscribed" practices.[117]

False or misleading reports of outages and unjustified outages by generators jeopardize the reliability of the system and the competitive markets for power. These behaviors are, and must be found to be, violations of the ISO and PX Tariffs.

C. Sellers' Bidding Practices During the Relevant Period Reflected a Concerted Effort to Manipulate the Prices in the ISO Real-Time Market

Proposed Finding of Fact: Generators and importers alike exercised market power by engaging in bidding practices that were anti-competitive, and that were intended to raise the market-clearing prices in the ISO real-time market.

Evidence adduced by the California Parties concerning the bidding practices of California's five major independent generators (The Big 5) reveals that AES/Williams, Dynegy, Mirant, and Reliant submitted bids into the ISO and PX markets between May 2000 and June 2001 in ways that were intended to, and did, exercise market power, in that Duke did so as well beginning in December 2000. To demonstrate these anomalous bidding patterns, the California Parties are submitting the prepared testimony and exhibits of Dr. Carolyn A. Berry[118] and of Dr. Philip Hanser.[119] The presentations of Drs. Berry and Hanser provide a quantitative demonstration of the bidding practices of the Big 5 between May 2000 to January 2001. Drs. Berry and Hanser both conclude that the bidding behavior of the Big 5 was not consistent with

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[116] MMIP 2.1 *et seq*.; MMR 2.1 *et seq*. Gaming" also is subject to scrutiny and "further action" and is defined to include "taking unfair advantage of the rules and procedures set forth in the PX or ISO Tariffs." MMIP 2.1.3.

[117] MMIP 2.1.1.5, 2.1.3, 2.3.3; MMR 2.1.1, 2.1.4.

[118] Berry Testimony, Exh. No. CA-7; Berry Appendices, Exh. No. CA-8.

[119] Hanser Testimony, Exh. No. CA-9; Hanser Appendices, Exh. No. CA-10.

competitive behavior, and instead reflected a concentrated effort to economically withhold supply and to raise the market-clearing price in the ISO and PX markets.

By analyzing ISO bid data, and other materials provided in discovery, Drs. Berry and Hanser quantitatively demonstrate that between May 2000 and June 2001, these generators engaged in bidding behavior that the Commission explicitly labeled as improper in its *April 26 Order*.[120] Bidding practices that the Commission disallowed included the submission of: (1) hockey stick bids, or bidding escalating prices in a manner not reflective of costs, for the output of a unit or units based on how much power was otherwise being purchased; as well as of (2) bids that vary over time for the same unit in a manner not reflective of costs, but of demand levels and of the perceived need for the power.[121] The Commission held that such practices are "anticompetitive" as part of the prospective market monitoring and mitigation plan (Prospective Mitigation Methodology) announced in the *April 26 Order*.[122] On February 10, 2003, the Commission Staff issued a data request to the ISO as part of its PA02-2 investigation in which it sought information pertaining, among other things, to economic withholding during May-October 2000. The purposes of the data request, the Commission Staff defined economic

[120] Order Establishing Prospective Mitigation and Monitoring Plan for the California Wholesale Electric Markets and Establishing an Investigation of Public Utility Rates in Wholesale Western Energy Markets. *San Diego Gas & Elec. Co., et al.*, 95 FERC ¶ 61,115 at 61,360 (2001) ("*April 26 Order*").

[121] For sellers that engaged in such behavior, the *April 26 Order* noted that "their rates w[ould] be subject to increased scrutiny by the Commission and potential refunds." Among the proposed remedies was that sellers that engaged in such practices could be subject to "further conditions or restrictions on their market-based rate authority including prospective revocation of [such] authority." *April 26 Order,* 95 FERC at 61,360. *See also* Order on Rehearing of Monitoring and Mitigation Plan for the California Wholesale Electric Markets, Establishing West-Wide Mitigation, and Establishing Settlement Conference, *San Diego Gas & Elec. Co.,* 95 FERC ¶ 61,418, at 61,565 (2001) ("*June 19 Order*").

[122] *April 26 Order,* 95 FERC at 61,360. The Commission emphatically affirmed its prohibition on such practices in the *June 19 Order* by noting that it "w[ould] not tolerate abuse of market power or anticompetitive bidding or behavior." *Id.* at 62,565.

withholding as "any bidding behavior which was unusual bidding patterns (e.g. hockey-stick bidding) of the use of excessively high bidding which is not supported by marginal costs.[123]

The evidence presented herein compels the conclusion that The Big 5 and certain importers engaged in prohibited bidding behavior, and that their bidding strategies did not reflect competition. The same rationale that prompted the Commission to disallow, and to propose possible remedies for, such bidding behavior for the post-June 20, 2001 period as part of its Prospective Mitigation Methodology, compels a similar result for the May 1, 2000 to June 19, 2001 period. The evidence gathered by the California Parties on such bidding practices, and the analysis performed by Drs. Berry and Hanser tell a convincing story of how bidding practices were used by sellers to exercise market power in the ISO real-time market. Such documented behavior provides strong support for the comprehensive remedial action recommended by the California Parties.

In her analysis, Dr. Berry reveals distinct seller bidding patterns that were unrelated to unit performance and/or that changed in response to increased demand or reduced reserve margins.[124] Among the anti-competitive bidding patterns identified by Dr. Berry are: (1) hockey stick bids; (2) bid spikes, or dramatic variation in bid prices from a single unit on a day-to-day basis; (3) not bidding at all despite being operable, uncommitted and apparently economic -- especially just prior to submitting bid price spikes; and (4) bids from a seller's units with similar costs at very different prices.[125] Such bids, notes Dr. Berry, are unrelated to the underlying costs

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[123] Exh. No. Cal-348. Letter from Donald J. Gelinas to Charles Robinson, dated Feb. 10, 2003, *Fact-Finding Investigation of Potential Manipulation of Electric and Natural Gas Prices,* FERC Docket No. PA02-2-000, at 2.

[124] Berry Testimony, Exh. No. CA-7 at 11-95.

[125] *Id*. at 7:3-12.

of production, and, in all likelihood, were strategically used by sellers to increase real-time prices during the relevant period.[126]

For instance, Dr. Berry details how the practice of bid price spikes was a prevalent practice by four of The Big 5 and of importers during the May-June 2000 period. Such actions appear unrelated to seller costs. Four of the five in-state generators (Dynegy, Mirant, Reliant and Williams) and four importers (BPA, Idaho Power, LADWP, and Powerex) engaged in this practice during ISO-declared system emergencies between May 1, 2000 and August 6, 2000.[127] The implications of such behavior cannot be overstated: during those periods when the ISO notified market participants of conditions that threatened the reliability of California's transmission grid, sellers were removing energy from the real-time market that would otherwise have been available at lower prices. Such behavior is a blatant exercise of market power, and as discussed herein, is clearly a violation of the ISO and PX Tariffs.

Dr. Hanser's testimony complements Dr. Berry's analysis. Examining the ISO bid data, Dr. Hanser determines that sellers structured their bids during the relevant period in ways that were not related to costs, but rather to changes in supply and demand conditions, and to changes in the sellers' particular market positions.[128] Such bids thus fall squarely within the ambit of those determined by the Commission to be "anti-competitive."[129]

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[126] *Id*. at 7:13-15.

[127] *Id*. at 7:16-20.

[128] Hanser Testimony, Exh. No. CA-9 at 7, 34-52.

[129] *June 19 Order*, 95 FERC at 61,565 (in response to generator rehearing arguments that hockey stick bids and bids that respond to market conditions are legitimate, the Commission countered that it "w[ould] not tolerate abuse of market power or anticompetitive bidding or behavior" in dismissing the arguments).

Dr. Hanser analyzes sellers' bids, estimates their marginal costs, and calculates the mark-up of such bids over marginal cost.[130] He concludes that beginning in May 2000, the bid mark-ups of four of The Big 5 were "on the order of literally hundreds of dollars per megawatt, and clearly [we]re not remotely related to their marginal costs."[131] Notably, the practice of selling power to the ISO in excess of costs was not confined to simply The Big 5. An internal Powerex memorandum dated January 4, 2031 (presumably 2001), to its Board of Directors, acknowledged that Powerex "was selling at high prices (US $700 to US $1,000 per MWh) in this market to ensure compensation for increased regulatory (risk of FERC refunds) and credit risks."[132]
Dr. Hanser examines The Big 5's bidding patterns in response to changes in their position in the market. The results of his analysis speaks volumes about The Big 5's ability to profit from price increases. Dr. Hanser demonstrates that The Big 5's bidding pattern during the relevant period was characterized by raising bids commensurate with attaining increasingly larger market positions in the ISO real-time market.[133] As a Mirant e-mail sent to eleven traders in July of 2000 put it :

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[130] *See* Hanser Appendices, Exh. No. CA-10 (Appendices PQH-H, PQH-I, PQH-J).

[131] Hanser Testimony, Exh. No. CA-9 at 38. Several pieces of evidence produced by the sellers in discovery reveals that it was commonly understood that bids were not related to costs. For example, an April 6, 2001 e-mail from Mirant trader Chris Turner to over a dozen of his colleagues stated that "[w]e need to always bid in excess MW's as supp bids that we cannot sell bilaterally, and at $150 or more to keep the beep price at $150." Exh. No. CA-142 at 1. In a telephone conversation between Dynegy trader Mark Chamblee and an unidentified party, in March 2001, Mr. Chamblee described his current bids as having "some frickin' major margin in there." Exh. No. CA-102 at 4. *See also* Exh. No. CA-190 at 2 (e-mail from Dynegy trader David Francis to his colleagues, reminding them to "[b]e sure and increase the bids when you see either out of sequence bids being hit or SWPL congestion").

[132] Exh. No. CA-196 at 1. Note that such prices were several multiples in excess of the ISO price cap in effect at that time.

[133] Hanser Testimony, Exh. No. CA-9 at 42-52.

> load is avg above 40 thousand during peak (sic). So, submit revised supp. Bids and "stick-it to 'em!! [134]

Dr. Hanser's analysis yields three powerful conclusions: (1) the ISO real-time market was not workably competitive based on the sellers' willingness and ability to submit bids unrelated to their underlying costs; (2) sellers that stood the most to gain from higher prices as a result of their market position were consistently bid most aggressively above their marginal costs; and (3) sellers exploited tight market conditions to raise bid prices above marginal costs. In this way, the market was not workably competitive, and the sellers were free to take advantage of their market power.[135]

The bidding practices documented by Drs. Berry and Hanser violate the applicable market monitoring rules of the ISO Tariff. The ISO 's Market Monitoring and Information Protocols (MMIPs) are incorporated into the ISO Tariff at Section 2.6.[136] The MMIPs are intended to be used by the ISO:

> to monitor the ISO Markets, to identify abuses of market power, to ensure to the extent possible the efficient working of the ISO Markets immediately upon commencement of their operation, and to provide for their protection from abuses of market power in both the short term and the long term, and from other abuses that have the potential to undermine their efficient functioning or overall efficiency in accordance with Section 16.3 of the ISO Tariff.[137]

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[134] Exh. No. CA-141.

[135] Hanser Testimony, Exh. No. CA-9 at 50-52.

[136] Section 2.6 of the ISO Tariff provides, in pertinent part, that "[t]he ISO shall monitor the markets that it administers in order to identify and, where appropriate, institute corrective action to respond to the exercise of market power or other abuses of such markets in accordance with" its MMIPs. ISO Tariff, § 2.6.

[137] ISO Tariff, MMIP 1.1. Section 16.3 of the ISO Tariff provides that the ISO will monitor its markets to determine if it must take action to "improve the efficiency of those markets or prevent the exercise of market power by any Market Participant . . . ."

The MMIPs define "anomalous market behavior" as "behavior that significantly departs from the normal behavior in competitive markets."[138] MMIP 2.1.1 lists five examples of what the ISO considers to be anomalous behavior, several of which were directly implicated by the aberrant bidding behavior examined by Drs. Berry and Hanser. These include:
(1) "[w]ithholding of Generation capacity under circumstances in which it would normally be offered in a competitive market;"[139] and (2) "[u]nexplained or unusual reductions of availability by Generators."[140] The pervasiveness of the sellers' strategic bidding is captured by these prohibitions. The bidding patterns of The Big 5 and the importers examined by Drs. Berry and Hanser bore little relation to the prevailing supply and demand conditions. In fact, when the totality of the sellers' manipulation games are fairly considered, their real-time bidding practices can be seen to have exacerbated supply and demand conditions during the relevant period.

These bidding practices are also implicated by the ISO Tariff provisions that govern "gaming." Gaming is defined as "taking unfair advantage of the rules and procedures set forth in the PX or ISO Tariffs, Protocols or Activity Rules, or of . . . other conditions that may affect the availability of transmission and generation capacity . . . or actions or behaviors that may otherwise render the system and the ISO markets vulnerable to price manipulation to the detriment of their efficiency."[141] The presentations of Drs. Berry and Hanser demonstrate that The Big 5 engaged in various bidding schemes that left the ISO real-time markets "vulnerable to

[138] ISO Tariff, MMIP 2.1.1; The PX Tariff has the same definition of anomalous market behavior. PX Tariff, Market Monitoring (MM), § 2.1.1.

[139] MMIP 2.1.1.1.

[140] MMIP 2.1.1.2.

[141] MMIP 2.1.3. The PX Tariff has the same definition. PX Tariff, MM, Section 2.1.4.

price manipulation." For example, the practice of bidding price spikes during emergency periods, and of submitting high bids commensurate with the sellers' market position, demonstrate how the sellers took unfair advantage of the market rules to the detriment of the entire market.[142]

Seller bidding behavior also contravened the applicable ISO Tariff provisions requiring generators to meet all applicable WSCC standards, and to comply with the requirements of the WSCC Reliability Criteria.[143] The WSCC Reliability Criteria establishes MORC that require all system participants to maintain system reliability. The MORC set forth the minimum criteria for operating reliability or procedures that are necessary for the secure and reliable operation of the interconnected power system. Among these criteria is the obligation that generation "be operated to achieve the highest practical degree of service reliability."[144] During emergencies, the obligations for generators are greater. They "are expected to cooperate and take appropriate action to mitigate the severity and extent of any foreseeable system disturbance."[145]

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[142] The Commission has investigated alleged violations of the MMIPs once before. In the spring of 2001, the Commission sought to determine if Williams violated the MMIP § 2.1.3, and ordered Williams to show cause why it should not be found, among other things, to have violated the ISO Tariff for having manipulated the availability of its Alamitos 4 and Huntington Beach 2 plants during April and May 2000. *AES Southland, Inc.,* 94 FERC ¶ 61,248 (2001) (*March 14 Show Cause Order*). Six weeks after the issuance of the show cause order, the Commission Enforcement Staff entered into a settlement agreement with Williams and AES concerning all of the issues raised in the *March 14 Show Cause Order*, including the MMIP ISO Tariff violations. *AES Southland, Inc.,* 95 FERC ¶ 61,167 (2001). *See also* Exh. No. CA-267. Rather than contesting the *March 14 Show Cause Order*, Williams refunded $8 million to the ISO.

[143] ISO Tariff, §§ 5.4.1-5.4.3.

[144] Section 1, MORC. *See* Tarplee Appendices, Exh. No. CA-18 at 5-31.

[145] Section 5, MORC. For a more detailed discussion of the MORC, *see* Tarplee Testimony, Exh. No. CA-17.

By submitting bids that greatly exceeded costs between May 2000 and June 2001, certain sellers violated the WSCC standards, as well as Section 5.4 of the ISO Tariff, by, in effect, compromising the reliability of the ISO system. During ISO-declared system emergency periods in the summer of 2000, the rampant practice of submitting bid spikes into the real-time market, as documented by Dr. Berry, conflicted with sellers' obligations under the MORC to "take appropriate action to mitigate the severity or extent" of the situation.[146] The failure to satisfy the MORC requirements placed the entire ISO grid in jeopardy.

The pattern of anticompetitive bidding shown by Drs. Berry and Hanser justifies Commission relief going back to May 2000. The violation of the applicable tariff rules supports a remedy of recalculating prices to the levels that would have existed if the rules had not been violated.

D. Sellers Submitted False Load Schedules to the ISO to Increase Scarcity and Prices in the Day-Ahead Market and to Move Load into the More Easily Manipulated Real-Time Market

Proposed Finding of Fact: A number of suppliers including Sempra, Powerex, Mirant, Dynegy, Reliant, Hafslund Energy, the City of Anaheim and Glendale, Pasadena and Redding, intentionally submitted false load schedules to the ISO to move resources into the real-time market.

Another strategy employed by sellers to deliberately and systematicly drive up prices by creating false shortages and scarcity, is the intentional submissions of false load information to the ISO. This strategy was referred to as Fat Boy or Inc-ing Load in the Enron Memos. The essence of this strategy is that the ISO Tariff requires balanced schedules, in which generation is scheduled against the load that a scheduling coordinator intends to serve by its schedule. Remaining generation would be bid into the PX and ISO markets. But as Dr. Fox-Penner

[146] Section 5 MORC.

testifies, the sellers' goal was to create artificial shortages in the PX and ISO markets which in turn enabled them to demand inflated prices.[147] To profit from the strategy, the sellers wanted as much power as possible to be paid the inflated prices, while as little power as possible was actually bid into the auction markets. Fat Boy was the mechanism to accomplish just this purpose. Rather than bidding generation into the market, a Scheduling Coordinator schedules it against bogus load. Because the ISO determines in real-time that the Scheduling Coordinator's load is below the scheduled amount but that the generation was equal to the scheduled amount, the difference is treated as an uninstructed deviation and earns the real-time market price as a price taker. This *de facto* sale of some of the Scheduling Coordinator's generation into the real-time market is precisely what the Scheduling Coordinator intended in the first place. That is, the seller successfully withheld supply from the auction markets, but nonetheless guaranteed that it would get paid the inflated price yielded by the auction markets.

Sellers that engaged in Fat Boy violated ISO Tariff Section 2.2.7.2 which requires a Scheduling Coordinator to submit to the ISO only Balanced Schedules in the day-ahead market and the hour-ahead market. As Section 2.2.7.2 provides:

> A Schedule shall be treated as a Balanced Schedule when aggregate Generation, InterScheduling Coordinator Energy Trades (whether purchases or sales), and imports or exports to or from external Control Areas adjusted for Transmission Losses as appropriate, equals aggregate forecast Demand with respect to all entities for which the Scheduling Coordinator schedules in each Zone.

Under the ISO Scheduling Coordinator Agreement, which was required to be filed with the Commission, Section 2B provides that the Scheduling Coordinator agrees to be bound by the terms and conditions of the ISO Tariff and that:

[147] Fox-Penner Testimony, Exh. No. CA-1 at 164-174.

> it will abide by, and will perform all of the obligations under the ISO Tariff placed on Scheduling Coordinators in respect of all matters set forth therein including, without limitation, all matters relating to the scheduling of Energy and Ancillary Services on the ISO Controlled Grid, ongoing obligations in respect of scheduling, Settlement system security policy and procedures to be developed by the ISO from time to time, billing and payments, confidentiality and dispute resolution.

The sellers violated the "forecast Demand" provision of this tariff section because they knew that they were intentionally submitting scheduled that specified a demand in excess of their forecasts. The sellers knew that they were intentionally submitting schedules that specified a demand in excess of their forecast to be served by the schedule. They violated the ISO Tariff prohibitions in order to game the market, decreasing supply in the organized auction markets, while at the same time profiting from the high prices yielded by those markets. Knowing that they had decreased supply in the organized auctions, the same sellers typically submitted high priced, or "spiked" bids, at or near the price caps -- and they knew that their tariff violations made it more likely that the spiked bids in the auction would be accepted, and that the resulting price would also apply to their bogus schedule. This is gaming, pure and simple -- violating the ISO Tariff in order to make it possible to exercise and to profit from market power.

Much evidence documenting the scheduling of false load by sellers has been confirmed in documents, manuals, and trader conversations. For instance: a Coral training manual for new traders includes a section called "Load Plays" which encourages "syncing the excess mw into one of [its] Load I.D.s;"[148] a Dynegy trader confirms that Dynegy's load deviation in August 2000 is "probably because [the traders] are just doing some dummy load scheduling;"[149]

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[148] Exh. No. CA-121 at 5.

[149] Exh. No. CA-202 at 3.

transcripts of conversations between Mirant and PSCo reveal a joint effort to engage in Fat Boy with the PSCo trader stating, "Why don't we just do something where we overschedule, overschedule load and share an upside, dude," with the Mirant trader responding, "That's fine;"[150] a trader at Redding initiates Fat Boy games with Sempra asking if Sempra was interested in "doing an ex-post deal today;"[151] on the same day, a Redding trader approaches Western about doing a ex-post deal;[152] a Sempra trader states that Sempra should submit "fake load" to the day-ahead market;[153] a Williams trading strategy is identified as "scheduling bogus load."[154]

Powerex sought to participate in this game and entered into contracts with PG&E Energy Services (an independent affiliate of PG&E that served some retail customers in California, and was sold to Enron Energy Services in June 2000) to serve PG&E Energy Services' load at various load points in California. An internal Powerex memo documents that Powerex entered into this contract with the explicit purpose of using the PG&E Energy Services load points for "overscheduling" and "underscheduling" and for congestion manipulation. Powerex consistently used Fat Boy for the remainder of 2000, having daily meetings to coordinate its optimization of schedules that would be submitted through Fat Boy, Megawatt Laundering, high-priced OOM sales, and other strategies. Powerex sometimes coupled its Fat Boy day-ahead schedules with demand bids into the PX -- thus, Powerex was further exacerbating the sense of a supply

[150] Exh. No. CA-204 at 38.

[151] Exh. No. CA-161 at 2.

[152] Exh. No. CA-161 at 3.

[153] Exh. No. CA-71.

[154] Exh. No. CA-22 at 2.

shortage to serve real load (the load in the PX day-ahead market) while planning that it would sell the same power back in real-time at the inflated real-time price. In other words, Fat Boy and Megawatt Laundering merged into one.

By performing an analysis of metered and scheduled load data provided by the ISO, Dr. Fox-Penner deduces that more that a dozen importing sellers persistently overscheduled load during all or part of the January 2000 through June 2001 time period.[155] Dr. Fox-Penner's analysis shows that Enron, Mirant, California Power Brokers, Enron Energy Services, Idaho Power, NewEnergy, PG&E Energy Services (which had contracted its load points to Powerex), Sempra, Anaheim, Riverside, Coral, Powerex, Hafslund Energy, Pasadena, and Dynegy were actively overscheduling loads at various times throughout the period. Moreover, the scheduling of false load was often pursued in cooperation with others. For instance, the Enron Network Service handbook described "Ex-Post Pricing" strategies including Fat Boy as well as Thin Man (an underscheduling game) which provided a list of partners with which Enron may have engaged in Fat Boy games, including Colorado River Commission, EPE, Glendale, Redding, Tosco, and Valley Electric.[156] A review of Enron's traders logs confirms that Enron engaged in Fat Boy games with EPE, Glendale and Redding and LV Cogen.[157]

Such behavior also created reliability concerns and additional costs to California's customers. These reliability concerns associated with this strategy were specifically addressed by the Commission in a March 31, 2000 Order accepting Amendment 26 in Docket No. ER00-

[155] Fox-Penner Appendices, Exh. No. CA-2 at 170-173.

[156] Exh. No. CA-105 at 515-6.

[157] Exh. No. CA-74.

1365.[158] This amendment modified RMR dispatch procedures with the intent of ensuring that energy from RMR units dispatched by the ISO is scheduled against demand in the real-time market. In direct violation of this order, as well as the ISO and PX Tariffs, suppliers continued to create "uninstructed deviations" through the submission of false loads to the ISO. Notably, some of the Fat Boy manipulators also had RMR contracts, and it appears that that they used the Fat Boy scheme as a mechanism to circumvent RMR scheduling requirements. Generators that selected the market path payment option for RMR units had to preschedule their generation bilaterally in the day-ahead market or allow the ISO to enter them into the day-ahead market as a price-taker. If these Scheduling Coordinators did not want to allow the ISO to pre-dispatch them as price takers, they had to find load that could be used to submit a balanced day-ahead schedule. Mirant is one of the ISO-internal generators that used false load information to create such a "balanced" day-ahead schedule.[159]

Many of the sellers implicated in this strategy claim that their generation did in fact serve real load, though not load that they were responsible for serving as Scheduling Coordinators. The evidence demonstrates that these practices and their purposes were no different from Enron's. These sellers willfully violated the Commission-approved tariffs by submitting false schedules to the ISO, with the purpose of creating false scarcity in the markets and raising prices. This behavior was pervasive through the pre-and post-October 2000 period, and affected all market prices through the period.

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[158] *California Independent System Operator Corp.,* 90 FERC ¶ 61,345 (2000).

[159] Exh. No. CA-324.

E. Sellers Engaged in Megawatt Laundering or Ricochet to Sell Power At Inflated Prices In the Real-Time Market

Proposed Finding of Fact: Numerous sellers, including Enron, Powerex, Sempra, Mirant, and Williams engaged in Ricochet or Megawatt Laundering. Reliant undertook efforts to hide Ricochet transactions. Sempra and Dynegy, Coral and Glendale, Constellation and LADWP cooperated in executing Ricochets to make detection more difficult. Entities including Public Service of New Mexico, Eugene Water, El Paso Electric, PacifiCorp, and Snohomish facilitated these arrangements by providing "parking services." These entities, working individually or in concert, submitted export schedules to the ISO in the hour-ahead or day-ahead market for power that they intended to sell back into the ISO in the real-time market or as OOM purchases in order to raise prices in the day-ahead market and evade ISO price caps on in-state energy or sell at higher prices in real-time.

Sellers also employed Megawatt Laundering or Ricochet to evade price controls that existed on power purchased from resources within the ISO system. In a Ricochet transaction, each MWh of export scheduled on a day-ahead or hour-ahead basis would, after "parking" at locations outside of the ISO system, be re-imported at higher prices back into the California ISO on a real-time basis or as OOM purchases. This strategy was sometimes executed by a single trader (who both exported and imported the power) and sometimes by two or more traders working in concert. Focusing primarily on Ricochets done by a single seller, Dr. Fox-Penner identifies approximately 15,000 hours in which more than 2 million MWh appear to have been shifted between the day-ahead and real-time markets throughout the May 2000-June 2001 period. Megawatt Laundering through multi-party transactions likely exceeded these levels substantially, because simple screens for simultaneous import and export cannot detect transactions where different parties are named for the import and export leg. Although the Ricochet strategy was used by at least twenty sellers, the analysis performed by Dr. Fox-Penner showed that the predominant users of this strategy were Powerex, which had over forty percent of the total MWh, as well as Puget Sound Energy, PacifiCorp, Williams, Sempra, and Enron.[160]

The systematic and routine use of Ricochet and parking services flies in the face of the general prohibitions in the ISO and PX Tariffs regarding gaming and anomalous market behavior. High volumes of Ricochets reduced the reliability of the ISO system, and had harmful economic impacts because congestion charges were collected when congestion was not actually relieved. Because the ISO would only buy OOM when it was concerned that day-ahead supplies were so low that it might not have enough real-time bid supply to meet system demand, the more it appeared that day-ahead supplies were being exported, the more likely was the ISO to buy OOM. Moreover, these exports created a sense of shortage within the ISO system, because the exported power was not available to balance ISO-internal loads on a day-ahead and hour-ahead basis. Significant concerns about rolling blackouts and other reliability issues gave sellers additional leverage for suppliers selling power back into the State at inflated real-time prices or as OOM purchases by the ISO and, starting in January 2001, by CERS.

Powerex engaged in a systematic pattern to buy extensively from the PX and sell extensively back to the ISO in real-time and OOM. Powerex's head trader congratulated its daily traders on their successful use of strategies to buy day-ahead and sell back real-time.[161] By December 2000, Powerex was "buying out of CA around the clock. . . ."[162] A key element of Powerex's strategy was to arbitrage between the PX and ISO markets to "[i]ncrease Powerex exposure to imbalance markets during price spikes" and "analyze the DA vs. Expost,

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[160] *See* Fox-Penner Appendices, Exh. No. CA-2 at 65-66.

[161] Exh. No. CA-40 at 4.

[162] Exh No. CA-38 at 3.

overschedule to load, bypass congestion on NW ties. Encourage arbitrage desk deals with CAISO."[163] After December 2000, Powerex sold large amounts of real-time power back into the California markets through sales to third parties. Powerex consciously cycled power out of and then back into California as the crisis continued, selling CERS $1.05 billion in power in the real-time markets, which it calls the "last minute" market,[164] admitting in its documents that it was "charging double the market at times."[165] Though it was selling, it was also buying from the same place, contributing to scarcity and providing a conduit for in-state suppliers who did not want to be forced to dispatch to the ISO at controlled prices. Powerex's transactions show that in emergency hours from December 2000 through May 2001, Powerex exported more than 230,000 MWh from California.[166] Under its license to engage in export transactions, Powerex is prohibited from exporting power from the United States which could impair system reliability. Notwithstanding such a prohibition, Powerex exported this power to Canada during ISO-declared system emergency conditions.

Despite this evidence, most sellers, including Powerex, denied in their PA02-2-000 responses to the Commission that they had engaged in Megawatt Laundering. But many suppliers engaged in numerous multi-party Ricochet transactions, including Sempra, Dynegy, and PacifiCorp. It appears that Sempra was able to mark up the costs of power to the California markets by up to seventy-two percent.[167] Mirant also engaged in Ricochet transactions with

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[163] Exh. No. CA-49.

[164] Exh. No. CA-39 at 9.

[165] Exh. No. CA-44.

[166] Fox-Penner Appendices, Exh. No. CA-2 at 67-86.

[167] Exh. No. CA-188; Exh. No. CA-94; Fox-Penner Appendices, Exh. No. CA-2 at 87; Exh. No. CA-217 at 7 to 9.

entities such as Seattle City Light (SCL), as reflected in a Mirant e-mail "so you have to make the u-turn at a pse, in this case scl. sssssuper!"[168] Mirant routinely engaged in transactions where it purchased from one marketer, "flipped" at an export point (such as Malin), and then immediately resold to CERS at significant markups as reflected in various e-mails such as, "We did a great number of trades during the evening, buying energy mainly from AEMC and EPMI and flipping it to CERS."[169]

These types of transactions were commonplace, as evidenced in documents showing that Enron engaged in a "Round the West" strategy;[170] Constellation Power Source and LADWP engaged in "ricochet schedule off Malin tie;"[171] Glendale Water & Power and Coral used a "Parking Road Map;"[172] PacifiCorp and Enron did a "buy-resell at Malin;" Williams and Enron acknowledged "ricochets related to Williams;"[173] and Reliant participated in Ricochet trades through "camouflage transactions."[174]

Reliant's "camouflage transactions" involved Reliant selling power out of California day-ahead to Arizona and New Mexico utilities, and buying it back for sale in real-time. To camouflage the transactions, Reliant arranged swaps where the power was sold at the Four Corners delivery point, but purchased back at the Palo Verde hub. Reliant would then sell the

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[168] Exh. No. CA-333 at 1.

[169] Exh. No. CA-140; *see also* Exh. Nos. CA-137, CA-318 through CA-323.

[170] Exh. No. CA-145 at 1210.

[171] Exh. No. CA-128.

[172] Exh. No. CA-168.

[173] Exh. No. CA-76 at 1.

[174] Exh. No. CA-56.

power back using the Scheduling Coordinator ID of another utility to further disguise the transaction.[175] Claims that in-state generators were not selling into the PX day-ahead markets because of their bilateral contracting arrangements should be evaluated in light of this evidence. Bilateral contracting arrangements may often have been nothing more than shams, designed to facilitate withholding from the day-ahead market and resale to the ISO at inflated prices.

Numerous entities offered parking services which effectuated Ricochet transactions, including APS, EWEB, El Paso Electric, Grant County, PacifiCorp, Pasadena, PNM, Portland General Electric, Puget Sound Energy, Riverside, SCL, Snohomish, TEP, and Avista Corp.[176] Many others bought parking services, including Aquila, CPS, El Paso Merchant, Enron, Idaho Power, Koch, MEICO, Morgan Stanley, PECO, PacifiCorp, Powerex, Sempra and TransAlta.[177]

These parking arrangements raise a number of serious legal concerns. First, the purchase and sale are on pre-arranged terms, with the parking party either getting a payment for each transaction (as was often done by PacifiCorp, for instance), or an upfront fee for the service (such as a $1 million upfront fee paid by Powerex to PNM). The Commission has previously reviewed such buy/resell transactions on the PacifiCorp system. In *Utah Associated Municipal Power Systems v. PacifiCorp,*[178] the Commission had held that such transactions are properly viewed as a transmission service that should be arranged on the OASIS with the transmission staff, with charges pursuant to the OATT of the host utility. The Commission directed

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[175] *Id.*; Fox-Penner Testimony, Exh. No. CA-1 at 112:27-114:17.

[176] Exh. Nos. CA-56, CA-67, CA-82, CA-134, CA-123, CA-89, CA-150, CA-327 and CA-320, CA-105, CA-110-116.

[177] Exh. No. CA-187.

[178] 83 FERC ¶ 61,337 (1998).

PacifiCorp to "cease" the practice of arranging such transmission service through its Merchant Function and to report any transaction consummated since July 9, 1996.[179]

Logs of Enron's deals show that PacifiCorp did hundreds of buy/sale transactions with Enron alone, but did not follow this order as to any of them. If those parking services are to include actual purchase and resale arrangements in which energy is purchased from and then sold back to the same party, then they are transmission services with public disclosure requirements and price limits. If they are viewed as fictional transactions in which no power actually leaves the ISO grid, then they are false schedules and violate the scheduling requirements of the ISO Tariff.

The problems caused by Megawatt Laundering were exacerbated by bidding behavior of the launderers. That is, the Megawatt Laundering served to reduce supply in the day-ahead PX market, and made it more likely that spiked bids in that market would have to be accepted. Since much of the laundered power was not returned even through the real-time market, but was instead sold as OOM sales, spiked bids in the real-time market would set the price in that artificially limited market. The big Megawatt Launderers, such as Powerex, were also key users of other strategies like the submission of hockey-stick bids to take advantage of the artificially constrained market. Thus, the Megawatt Laundering strategy enhanced the ability of sellers to exercise market power, which they did through high-priced spiked bids.[180]

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[179] *Id*. at 62,367 (footnotes omitted).

[180] The Commission's August 13, 2002 report on the Fact-Finding Investigation of Potential Manipulation of Electric and Natural Gas Prices noted, Ricochet or Megawatt Laundering behavior "was not legitimate arbitrage, but was an exercise of market power." *Staff Initial Report on Company-Specific Separator Proceedings and Generic Reevaluations Published Natural Gas Price Data; and Enron Trading Strategies Fact-Finding Investigation of Potential Manipulation of Electric and Natural Gas Prices, Docket No. PA02-2-000 at 104 (August 13, 2002).*

Enron trader Timothy Belden, in his plea agreement for fraud, conceded that he "exported and then imported amounts of electricity generated within California in order to receive higher, out-of-state prices from the ISO when it purchased 'out of market.'"[181] He and Enron were obviously not alone. Numerous other sellers likewise submitted false and deceptive schedules to the ISO. Such gaming and false submission of information to the ISO is unlawful, and it broadly impacted prices throughout the May 2000 through June 2001 period.

F. Sellers Engaged in Death Star and Other Congestion Games

> **Proposed Finding of Fact:** Numerous sellers, including Mirant, Duke, Enron, Powerex, Sempra, the Modesto Irrigation District, the Cities of Redding and Glendale, LADWP and NCPA created circular import-export schedules that resulted in sellers appearing to create counter flows on the ISO grid for which the ISO paid congestion revenues, when, in fact, they did not move any power or relieve any congestion. This resulted in improper congestion payments and increased zonal energy prices.

Many sellers consistently engaged in Death Star and other congestion games including Cut Schedules and Load Shift games. The common element among these congestion strategies is that they schedule counterflows that earn payments for relieving congestion without actually providing any congestion relief. Dr. Fox-Penner shows that a number of sellers engaged in Death Star, also known as a "circular schedule," which uses two back-to-back transaction schedules that simultaneously export and re-import the same power on a day-ahead (or possibly hour-ahead) basis, creating congestion relief payments without actually providing congestion relief. As Dr. Fox-Penner explains, a schedule that included a known circular trade that was counted on and paid for relieving day-ahead or hour-ahead congestion constituted the intentional submission of a false day-ahead or hour-ahead schedule to the ISO, in violation of the tariff

[181] Exh. No. CA-229 at 3:14-16.

scheduling requirements. It also constitutes gaming and anomalous market behavior as defined in the ISO and PX Tariffs.

Dr. Fox-Penner's analysis shows that at least nineteen Scheduling Coordinators engaged in Death Star trades between May 1, 2000 and June 19, 2001. Among these, the largest volume of potential Death Star trades were by Coral, Enron and Sempra Energy Trading.[182] Enron has previously described the use of these gaming transactions as Death Star, Forney Perpetual Loop, Red Congo, and NCPA Cong Catcher.[183] Similarly, colorful names were given to the import and export legs of these transactions which were identified as EPMI_Star, CISO_Death, Curious and George, Red and Green, Hungry and Hippo, James and Dean or Chinook and Atlantic and SCEM_Loopy.[184] The evidence also implicates other sellers that engaged in significant Death Star type transactions including Coral, Redding, NCPA, MID, the City of Glendale, Mirant, Duke, Sempra, and Powerex.[185]

Sellers that engaged in congestion games did so to collect "free money"[186] because they would be paid by the ISO for falsely appearing to relieve congestion. As one seller noted, "MID is in unique position to create revenue from congestion."[187] MID's use of this strategy occurred nearly every day through to the end of February 2001.[188] Trader transcripts and documents

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[182] Fox-Penner Appendices, Exh. No. CA-2 at 142..

[183] Fox-Penner Testimony, Exh. No. CA-1 at 132-139.

[184] *Id.* at 144.

[185] *Id.* Exhibit Nos. CA-111, CA-114, CA-115, CA-127, CA-129, CA-131, CA-22, CA-145, CA-93, CA-145, CA-74; CA-164.

[186] Exh. Nos. CA-145 at 1225 and 1320-1.

[187] Exh. No. CA-88 at 4.

[188] Exh. No. CA-99.

confirm that other sellers were also using Death Star type transactions. As a City of Glendale trading strategy noted, "Congestion revenues can be earned by the City at tie-points or on intra-state transmission lines. . . ."[189] A Mirant trader's reported conversation states, "I mean its just kind of loop-t-looping but it's making money . . . laugh."[190]

Dr. Fox-Penner described Dynegy congestion games coupled with Fat Boy false loads. Dynegy, rather than using a loop, submitted a day-ahead schedule from its resources in SP15 to a fake load in NP15. It then cut the schedule to get paid for relieving the false congestion that arose from its false schedule to false load.[191] Dynegy miscalculated, in the particular instance noted in the e-mail, because its initial schedule submissions had implications for the hour-ahead and real time markets as well. But the willingness of Dynegy to violate the ISO Tariff by submitting false load information, with the intent that it would create congestion that Dynegy would get paid to relieve, is telling.

Death Star and the other congestion games had significant reliability impacts. On July 21, 2000, the ISO reported:

> Several market participants have engaged in a practice of scheduling large amounts of non-firm counter flows on congested branch groups in order to earn hour-ahead congestion revenues and then not providing those counterflows in real time. This occurred during a Stage 1 emergency on 7-20-00. This practice creates a significant reliability problem for the ISO and is to the detriment of market efficiency. This notice is intended to inform Market Participants that the ISO Department of Analysis considers this a

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[189] Exh. No. CA-168 at 1-2.

[190] Exh. No. CA-204 at 21.

[191] Fox-Penner Testimony, Exh. No. CA-1 at 146:39-147:16.

> potentially serious "gaming" practice as defined in the ISO Tariff MMIP 2.1.3.[192]

This market notice was widely and systematically ignored.

The false perception of congestion meant that some resources were unavailable to serve loads in portions of the grid. This resulted in increased prices for energy in the congested zone and allowed sellers in the zone to increase prices further through manipulative bidding or other games. Like the other strategies, the congestion games cannot be analyzed in isolation. Nearly all of these games relate to a willful strategy to create a false perception of scarcity and then capitalize on that false perception through submission of bids and offers at prices above competitive levels.

G. Sellers Double Sold Ancillary Services Capacity from the Same Generating Units

> **Proposed Finding of Fact:** Mirant, Reliant and Dynegy sold Ancillary Services capacity to the ISO as reserves but then sold energy from the same units as uninstructed deviations rather than keeping the capacity unloaded and available for use by the ISO as reserves. This resulted in double payments for the generator and created reliability problems for the ISO because the reserves were not available when needed and the ISO was forced to deal with excessive, uninstructed deviations.

In February 1999, the ISO filed a Tariff amendment with the Commission to eliminate payments for uninstructed double-selling by internal resources called the "No Pay" policy. The Commission approved this amendment in Docket No. ER99-896 in its order on February 19, 1999 stating that the No Pay policy would "ensure that Ancillary Service providers will have no economic incentive to dishonor their commitments and a strong incentive to honor them."[193]

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[192] *Id.* at 147:9-17.

[193] *California Independent System Operator Corp.,* 86 FERC ¶ 61,122 (1999), *reh'g denied,* 101 FERC ¶ 61,021 (2002).

However, the ISO did not complete its software change to enforce the No Pay policy until September 2000.

As a result of the generators' double selling, Dr. Fox-Penner testifies that significant harm from both an economic and reliability perspective may have occurred by causing the ISO operational difficulties, raising costs, and even may have caused the ISO to violate NERC or WSCC operating guidelines. The flagrant disregard of the Commission's order issued in February 1999 and the ISO amendment implementing the No Pay policy resulted in violations of the ISO Tariff as well as the Commission orders prohibiting such activity.

As Dr. Fox-Penner explains, this strategy involved the intentional violation of the generators' obligation to keep unloaded (*i.e.*, not produce energy from) the Ancillary Service capacity sold to the ISO, unless the generator is specifically instructed by the ISO to produce energy from that set-aside reserve capacity. Generators can violate their Ancillary Service obligation through uninstructed generation of energy from the resource that is supposed to remain unloaded. Prior to September 2000, generators that pursued such uninstructed generation from Ancillary Service capacity were paid twice. First, the generator was paid for keeping the awarded Ancillary Service capacity unloaded (unless dispatched by the ISO). Second, the generator was also paid the real-time price for the energy that was injected into the grid as an "uninstructed deviation."

Dr. Fox-Penner conducted an analysis which identifies uninstructed double selling by Dynegy, Mirant, and Reliant.[194] By assessing how much capacity a generating unit had available during real-time operations and comparing that amount to the Ancillary Service capacity that was awarded by the ISO, Dr. Fox-Penner determined that as late as the summer of 2000, just

[194] Fox-Penner Appendices, Exh. No. CA-2 at 165.

prior to the implementation of No Pay policy, Dynegy, Reliant, and Mirant were all double-selling energy, with Mirant double-selling from more than a third of its Ancillary Service obligation in June, 2000. Sellers engaged in intentional gaming of the ISO Tariff, with the serious reliability implications that reserves that were supposed to be available were not available because of the generators' deliberate attempts to pursue uninstructed generation. These sellers violated the ISO Tariff and Commission orders, with the sole intent of increasing the sellers' profits.

H. Sellers Engaged in the Get Shorty Strategy of Selling Non-Existent Ancillary Services to the ISO

Proposed Finding of Fact: A number of sellers including, Enron, Sempra, Coral, Avista, Williams, the Cities of Glendale and Avista and the Modesto Irrigation District falsely designated generating units as providing Ancillary Services they sold into the day-ahead market and then hid the non-existence of the services by buying the Ancillary Services back in the hour-ahead market, or sold and fully repurchased Ancillary Services without any intent to deliver the services they sold. This increased costs and created reliability problems for the ISO.

A number of sellers engaged in Get Shorty, which involved selling Ancillary Services in the day-ahead market and then buying back a portion of the capacity in the hour-ahead market, when the seller did not actually have Ancillary Service capacity to offer. A number of sellers sold non-existent Ancillary Services that they would not have been able to provide when called on during real-time or sold Ancillary Services that they never intended to deliver. Such conduct violated ISO Tariff Section 2.5.22.11, Failure to Conform to Energy Dispatch Instructions:

> All SCs providing AS shall be obligated to respond or to secure response to the ISO's dispatch instructions with their terms, and to be available and capable of doing so, for the full duration of the Settlement Period. If a Generating Unit, Curtailable Demand or System Resources in unavailable or incapable of responding to a

> Dispatch instruction, or fails to respond to a Dispatch instruction, it is deemed non-conforming to the ISO's instructions.[195]

In addition, Section 4.3.1 of the ISO Participating Generator Agreement requires:

> When the Scheduling Coordinator on behalf of the Participating Generator submits a bid for Ancillary Services, the Participating Generator will, by operation of this Section 4.3.1, warrant to the ISO that it has the capability to provide that service in accordance with the ISO Tariff and that it will comply with ISO Dispatch instructions for the provision of the service in accordance with the ISO Tariff. [196]

Enron, Sempra, Coral, Powerex, Modesto Irrigation District, Avista, and the City of Azusa, all engaged in Get Shorty for a substantial portion of the summer and fall of 2000. In Dr. Fox-Penner's analysis comparing Ancillary Service buyback activities for importers and ISO-internal generators, he found that the Scheduling Coordinators would sell significantly more Ancillary Service in day-ahead markets at times when they were conducting buybacks. They would also rarely make Ancillary Service sales without almost complete repurchase of day-ahead sales, indicating that theses entities either sold non-existent Ancillary Services to the ISO or simply had no intention of delivering the Ancillary Service capacity that they sold. This

[195] *See also* ISO Tariff Section 5.1.3, requiring Participating Generators to take actions as directed by the ISO to maintain the reliability of the ISO Controlled Grid, including compliance with the ISO's Dispatch instructions to deliver Ancillary Services.

[196] Participating generators were bound by the ISO Tariff as provided in Section B: "The ISO tariff further provides that the ISO shall not be obliged to accept Schedules or Adjustment Bids or bids for Ancillary Services relating to Generation from any Generating Unit interconnected to the ISO Controlled Grid unless the relevant Generator undertakes in writing to the ISO to comply with all applicable provisions of the ISO Tariff" and Section C: "The Participating Generator wishes to be able to Schedule Energy and to submit Adjustment Bids, Supplement Energy bids and bids for Ancillary Services to the ISO through a Scheduling Coordinator and, therefore, wishes to undertake to the ISO that it will comply with the applicable provisions of the ISO Tariff."

conclusion was also reached by the ISO, indicating that buyback arbitrage "clearly indicates no intent to provide the service but rather [to] take advantage of ISO settlement rules."[197]

Enron would "sell short" Ancillary Services in the day-ahead market by falsely designating external resources, even though it did not physically have available Ancillary Service capacity from the designated resources.[198] Trading strategies that Coral and Glendale executed called "Phantom Ancillary Services" indicate that the Get Shorty-type strategy "works best when Capacity is being purchased at near its cap price by the ISO, and should be used when the generation is not actually available to back the capacity offer."[199] A Mirant trader described as "DA Trickery" the sale of certain Ancillary Services that would be repurchased at a later time so that Mirant could "make a sweet margin."[200] Williams repeatedly sold Ancillary Service with no intention of delivering the sold service in real-time, as documented in a Williams e-mail which states, "We couldn't perform 97 of reg up, even if AGC min was 10! What will it take to get the traders to cease committing the units to schedules they cannot perform? I feel pretty stupid telling the units the same thing over and over again."[201] As the ISO noted, Dynegy was also able to play Get Shorty games: "Dynegy again today has Kearny 3 bid (and awarded) 60 MW non-spin but are good for only 30 MW due to some maintenance work."[202]

[197] Exh. No. CA-112.

[198] Exh. No. CA-109 at 24.

[199] Exh. No. CA-168 at 1.

[200] Exh No. CA-34.

[201] Exh. No. CA-21.

[202] Exh. No. CA-149 at 3.

As a result of the Get Shorty-type strategies used by the sellers, there were significant economic and reliability consequences on users of the grid. As Dr. Fox-Penner explains, WSCC rules require the ISO to maintain minimum amounts of Ancillary Service under contract depending on loads and other facts.[203] If the ISO is unable to rely on day-ahead schedules of Ancillary Service, it must overbuy Ancillary Service in the day-ahead market as an insurance margin or scramble to fill the gap with hour-ahead purchases. As a result the total market cost is increased and creates the risk that the ISO will be caught short of required Ancillary Service capacity in real-time, leading to market-wide reliability problems. As discussed above, this problem was significant enough that the ISO proposed a Tariff amendment to ban such Ancillary Service sell-repurchase strategies, which was widely ignored by the suppliers.

Like most of the other strategies employed by sellers, the impacts of this strategy are significantly more far-reaching than they first appear. It is not an issue of simply paying back the cost of the false Ancillary Services. The fact that the ISO had to buy excess reserves resulted in increased apparent scarcity in the markets, and inflated the prices of all products in the markets. Sellers could then have a greater ability to increase prices still further through other bidding and trading strategies.

I. Sellers Engaged in Uninstructed Generation Games

Proposed Finding of Fact: Several sellers including Mirant, Reliant, and Dynegy intentionally deviated from instructed dispatch levels to bid up the real-time price while minimizing the cost of such manipulation, increasing costs and creating reliability problems for the ISO.

Another strategy employed by sellers was to run uninstructed deviations to ensure that the generator would earn the real-time price even after the ISO rejected the generator's inflated

[203] Exh. No. CA-1 at 161; *see* WSCC Reliability Criteria.

bid or did not select the generator for OOM purchases. As Dr. Fox-Penner explains, uninstructed generation refers to a difference between the level of output for a generator that is instructed by the ISO and the generator's actual output. Several sellers used uninstructed generation games where generation was intentionally produced within the ISO or imported at levels higher than the levels dispatched by the final hour-ahead schedule plus the ISO's instructed real-time generation (including supplemental or OOM energy). Such deviations from instructed dispatch levels are called uninstructed deviations.

The deviation games identified by Dr. Fox-Penner either relied either on uninstructed overgeneration (*i.e.,* positive "uninstructed deviations") or uninstructed under-generation (*i.e.,* negative uninstructed deviations). In the first variation, a generator would bid high into the real-time market in an attempt to drive up market price. If the ISO did not select the high real-time bid, the generator would run "uninstructed" in order to receive the real-time price. While this price would be below the generator's bid, it would still be above the generator's costs or else the generator would not produce uninstructed energy. In the second variation, the generator would refrain from placing any real-time bids or would "hold back" generation from bidding into the day-ahead and real-time markets in an attempt to force the ISO into OOM purchases. After the ISO completes its OOM purchases, some or all of the generation not sold as a result of the ISO's OOM purchases would be run uninstructed to earn the real-time price. In a third variation, which was engaged in during the CERS period (spring of 2001), a generator would be asked to provide power under purchases made by CERS, often at the request of the ISO. The generator then intentionally would produce less than the instructed amount of generation, while still attempting to obtain payment for the full amount from CERS. This shortfall in real-time generation would need to be supplied by the ISO and often, at the ISO's instructions, would have to be procured and paid for (again) by CERS as an additional OOM purchase at uncapped prices.

The ISO, recognizing that these uninstructed generation games would cause significant problems to ISO operations and reliability, made an effort to stop the gaming behavior as evidenced in a market notice on July 31, 2000. The notice provided in part that:

> This notice is to advise all Scheduling Coordinators and owners of Generation in the ISO Control Area that the ISO is issuing an operating order for July 31, 2000, that all resources must follow final Hour Ahead Schedules, as adjusted by RMR Dispatch Notices, or by Dispatch instructions verbal or electronic on AS or Supplemental Energy bids. NO UNINSTRUCTED DEVIATIONS WILL BE ALLOWED. Section 2.3.1.2.1 of the ISO Tariff requires Market Participants in the ISO Control Area to "comply fully and promptly with the ISO's operating orders." Any Generating Unit with RT output that reflects an excessive deviation from the RT output consistent with in Final Hour Ahead Schedule as adjusted by Dispatch instruction, and assuming a 20 minute ramp across the top of the hour hourly Schedule changes, will be deemed to have failed to comply with this order.[204]

To assess the impact of the uninstructed over generation games, Dr. Fox-Penner developed a conservative data screen which analyzed a large amount of uninstructed generation over the entire January 2000 through June 2001 time period, to take into account uninstructed generation which may have been a part of normal plant operations. The results show that Mirant, Reliant, and Dynegy all dispatched significant uninstructed generation from the summer of 2000 through the early spring of 2001, in direct violation of the ISO's market notice, and ISO Tariff provisions requiring compliance. Mirant's uninstructed over generation ranged from thirteen percent to twenty-three percent with Reliant's and Dynegy's uninstructed generation running in the seven percent to eight percent range in the summer of 2000. In various months in the Fall of

[204] Exh. No. CA-238.

2000 and Winter of 2001, Mirant produced uninstructed generation in the range of eight percent, Dynegy produced fourteen percent, and Reliant, seven.

These games are evidenced in documents which disclose various strategies including a Mirant strategy to "monitor 10 minute incremental/decremental price" and "adjust' its resources in response to the observed real-time price movement;[205] a Williams strategy called "over generate/undergenerate (uninstructed deviation);"[206] a Sempra e-mail that notes that the company has been "doing a good job of communicating to the plant operators to over or under generate based on the uninstructed SP15 energy price;"[207] a Reliant strategy which states that Reliant would "submit a supplemental hourly bid at $250" into the ISO's real-time market using other entities' names in an apparent attempt to "camouflage" Reliant's own bidding behavior.[208] Sellers systematically and deliberately employed uninstructed deviation games to maximize profits in direct contravention of the ISO Tariff and ISO directives to cease such behavior.

J. Sellers Shared Non-Public Generation Outage Information Using Industrial Information Resources, Inc. As An Intermediary

Proposed Finding of Fact: Many sellers, including Dynegy, Duke Energy, and Williams, exchanged non-public information regarding planned and on-going generation unit outages with their competitors using a service called Industrial Information Resources, Inc. (IIR). This exchange of generation unit outage information facilitated market manipulation and the coordination of conduct among competitors.

In discovery, the California Parties found a series of internal Duke e-mails in which Duke trader James Stebbins provided non-public information regarding generation outages of

[205] Exh. No. CA-235.

[206] Exh. No. CA-22 at 2.

[207] Exh. No. CA-66.

[208] Exh. No. CA-56.

competing companies to more than fifteen others in Duke's trading operation.[209] Each of the e-mails stated that the information had come from "the mole." For example:

> I just heard from the mole. He is reporting that the PV3 will be coming back on line 6 days earlier than expected. The new return date is March 3. Good luck and happy selling.[210]

In response to a data request, Duke revealed that "the mole" was "a nickname for Industrial Information Resources, Inc."[211]

Further investigation uncovered the following: IIR is a company located in Houston, Texas that provides, among other things, a generation outage notification service. IIR obtains outage information by calling personnel at the plant subject to the outage and then provides that information to its subscribers through a "daily update" sent by e-mail.[212] The information IIR provides in these daily updates is plant- and unit-specific and detailed, providing the expected start date for the outage, the expected return to service date, a description of the unit, and the cause of the outage.[213] In addition, subscribers to IIR could e-mail the service and request immediate information on outages of a competitor's plants. IIR would then call personnel at the competitor's plant and report back by email what they were told.[214] A one-year subscription to the service cost approximately $70,000.[215]

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[209] Exh. No. CA-95.

[210] Exh. No. CA-95 at 3.

[211] Exh. No. CA-253.

[212] Fox-Penner Testimony, Exh. No. CA-1 at 51.

[213] Exh. Nos. CA-95 and CA-97.

[214] *See*, *e. g.*, Exh. No. CA-95.

[215] Exh. No. CA-96.

Duke was not the only major California generating company that subscribed to IIR during all or a significant part of the period from January 2000 through June 20, 2001. Williams and Dynegy did as well.[216] IIR stated in response to a Commission subpoena issued at the California Parties' request that its subscribers were advised by IIR that all of its outage information is obtained from or confirmed by the personnel at the generating facility subject to the outage, and stated that this "is a big selling point for our services and is well documented in our literature and promotional materials."[217] IIR also produced to the California Parties in response to the subpoena the actual data it provided to all of its subscribers in the west during the relevant period through its daily updates. Outages of the California generating units of Duke, Dynegy, and Williams appear frequently on those reports.[218] At the very least, therefore, these companies knew, from seeing the reports, that their own outages were being reported to all competitors that subscribed to the service -- a service that Williams' market analyst Brian Skinner testified in a deposition was understood to be widely used by other companies in the industry as a source of outage information.[219]

Duke trader, Mr. Stebbins, testified in his deposition that he was troubled the first time he saw an outage at a Duke plant reported on an IIR daily update.[220] He was troubled in part because market-sensitive information about his own plants was being reported to his competitors, and in part because he had not been informed of this particular outage by Duke's

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[216] Exh. No. CA-98; CA-1 at 53:15-21. IIR's subscribers also included a number of significant trading companies in the west including Enron, Coral, El Paso Energy, and Avista.

[217] Exh. No. CA-98.

[218] Fox-Penner Testimony, Exh. No. CA-1 at 54:12-14.

[219] *Id.* at 54: 16-18.

[220] Exh. No. CA-252 at 61.

operators.[221] At first he believed that the IIR report must be in error, but he discovered that it was correct. He then reported his concerns to the plant manager and to his supervisor.[222] Nonetheless, Mr. Stebbins testified that he continued to see information about Duke outages appear on IIR's reports and he raised no further concerns to his management regarding these reports of Duke outages.[223] He further testified that he is unaware of any action taken by Duke to attempt to stop IIR from publishing Duke outage information to IIR's other subscribers.[224] Williams market analyst Mr. Skinner similarly testified that he recalled seeing, on the IIR daily updates, outage information regarding the AES plants that Williams markets.[225] He stated that he does not recall being troubled by that and was unaware of any efforts to stop it.[226]

This exchange and dissemination of outage information through IIR facilitated the manipulation of California's power market and the coordination of conduct among sellers. As Dr. Fox-Penner explains:

> Pivotal suppliers who are observing each others' outages in near-real time have an ideal means of gauging their pricing response to that outage. In most cases, a pivotal suppliers' reaction to the outage would be to increase their own prices. Thus, through the information-sharing mechanism of IIR subscription a single unintended or intended outage could serve a signal to other pivotal suppliers to raise bids or withdraw additional capacity.

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[221] *Id.* at 65.

[222] *Id.* at 65:19-22.

[223] *Id.* at 66.

[224] *Id.* 67-69.

[225] Ex. No. CA-20 at 10.

[226] Ex. No. CA-20 at 11.

Indeed, Mr. Skinner admitted that outage information supplied by IIR reduces trading risks, influences sellers' pricing decisions, and helps determine whether or not to sell energy during a particular period or in a particular location.[227] Mr. Stebbins similarly testified that IIR outage information can have a significant effect on both pricing and bidding.[228] Providing multiple competitors with the same, otherwise non-public, outage information signals all of those competitors to act in a knowingly parallel manner multiplying the potentially anticompetitive impacts of their individual market power.

The ISO Tariff prohibits market participants from reviewing any documents, data, or other information regarding an individual generator's outage program. ISO Tariff section 20.3.2 defines five categories of information as confidential, the fifth category of which is "Individual Generator Outage programs. . . ." ISO Tariff Section 20.3.1 provides that the ISO shall keep such information confidential. ISO Tariff Section 20.3.3 provides that "No Market Participant shall have the right . . . to review any documents, data or other information of another Market Participant to the extent such document, data or information is to be treated in accordance with Section 20.3.2. . . . ."

The exchange of outage information with competitors through IIR also raises serious issues under the antitrust laws. Although further discovery and analysis are required to determine the full extent of this conduct,[229] it is clear already that it went far beyond the sorts of information exchanges that courts and antitrust enforcement agencies consider reasonable.

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[227] Ex. No. CA-20 at 7-8.

[228] Exh. No. CA-252 at 46-47.

[229] For instance, of the major sellers only a single individual for each of Williams and Duke have been deposed on these subjects, and no one from IIR itself has yet been deposed. Nor has there been any significant document discovery of even the major sellers regarding these subjects.

Courts have long recognized that, in conjunction with other factors such as high market concentration and parallel pricing and output decisions, information exchanges like those uncovered here can form the basis for inferring a *per se* illegal conspiracy to fix prices or output.[230] In addition, even in the absence of a price fixing agreement, the exchange of price or output information can itself violate the Sherman Act as an unreasonable restraint of trade, if it causes anticompetitive effects.[231]

It is particularly telling that the companies involved knew that they were not permitted to discuss generation outage information with their competitors and put rules and guidelines in place to prevent it. Mr. Skinner, of Williams, testified in his deposition that Williams' antitrust training included instruction that Williams' personnel are not to discuss competitive information with other companies, which, he stated, includes information about outages because it relates to price and competition.[232] Mr. Stebbins, of Duke, similarly testified that Duke's code of conduct prohibits employee contacts with competitors regarding plant outages because it is market-sensitive information.[233]

[230] *See, e.g., American Column & Lumber Co. v. United States*, 257 U.S. 377, 410-12 (1921) (holding that trade association's "Open Competition Plan" involving exchange of detailed data on sales, production, and inventories, as well as estimates of future production levels and market demand, evidenced an unlawful agreement to curtail production and raise prices); *Petroleum Prods. Antitrust Litig.*, 906 F.2d at 446-47 and 462 (allowing inferences of *per se* illegal price fixing based in part on public dissemination of price information and, independently therefrom, on direct and indirect exchanges of present and future output information).

[231] *See, e.g.*, *United States v. Container Corp. of America*, 393 U.S. 333 (1969) (upholding Sherman Act § 1 complaint against exchange of price information despite absence of agreement to adhere to a price schedule).

[232] Exh. No. CA-20 at 15-16.

[233] Exh. No. CA-253 at 34:10-16.

But using IIR as an intermediary to obtain outage information from competitors does not make this conduct lawful. The ISO Tariff prohibits a market participant from reviewing another market participant's generation outage program, regardless of how it is obtained. And, as the courts have held, what competitors may not legally do in direct communications among themselves is also forbidden when done via intermediaries.[234] The exchange of non-public generation outage information by Dynegy, Duke, Williams, and others through IIR enhanced these sellers' ability to exercise market power and facilitated the coordination of conduct among competitors thereby leading to greater market manipulation by sellers. All of this was in violation of the ISO Tariff and possibly the antitrust laws.

K. There Was a Significant Level of Collusion and Collective Behavior Among Sellers

> **Proposed Finding of Fact:** Certain sellers colluded through the joint implementation of market manipulation strategies including the scheduling of false load and the selling of non-existent Ancillary Services, and the sharing of critical market information to exercise market power. Powerex and LADWP entered into a profit sharing arrangement to facilitate the joint exercise of market power.

During the relevant period, the anti-competitive conduct of sellers often occurred through collective behavior, or collusion. These joint actions were in many cases explicit, where both parties clearly knew they were manipulating markets. In other cases, the joint action consisted of one party manipulating markets or engaging in anti-competitive strategies with the tacit (and often profitable) assistance of a second party who, like the proverbial monkey, "saw no evil."

[234] *See, e.g., Petroleum Prods. Antitrust Litig.*, 906 F.2d at 447 (rejecting defense that public nature of price announcements precluded inference of illegal tacit agreement because "'the form of the exchange -- whether through a trade association, through private exchange as in *Container,* or through public announcements of price changes -- should not be determinative of its legality.' R. Posner, *Antitrust Law: An Economic Perspective* 146 (1976)").

These collusive actions raise very serious antitrust concerns. They should also be an important element in the Commission's evaluation of the appropriate remedy in this proceeding.

The evidence set forth regarding the exchange of competitive outage information through Industrial Information Resources, Inc. is only an example of the arrangements that facilitated market manipulation and collusion to sellers. The additional evidence presented in the testimony of Dr. Fox-Penner and summarized below compels the conclusions that joint action among market participants was commonplace and adversely impacted market efficiency. The testimony of Dr. Fox-Penner, however, illuminates only a part of the significant body of evidence relating to joint action now in the record of this proceeding. Other examples are found throughout the testimonies of the witnesses in this proceeding. Selections from that additional evidence, as well as other examples developed during discovery, are identified below.

1. Coordination and collusion were accomplished through formal and informal agreements and through a variety of information-sharing channels

There are two broad categories of joint action identified by Dr. Fox-Penner: two-party agreements, often, but by no means always, memorialized in contracts or written agreements; and information sharing channels, ranging from trader-to-trader conversations to the systematic sharing of information regarding the status of generation units.[235] Subcategories within each of these two broad categories are discussed below.

Concerns with these same issues were expressed by Staff Witness Deters in the *El Paso Electric* proceeding in Docket No. EL02-113-000 when he noted that "[a]lliances and trading of information could transform what appears to be a marketplace of several independent competitors into a set of entities, either wittingly or not, with aligned interests in maximizing

[235] Fox-Penner Testimony, Exh. No. CA-1 at 42-43.

profits."[236] It is precisely these sorts of alliances and trading of information that are the subject of this section.

a. Two-Party Agreements -- Generally

Included in this category are a variety of agreements reached between parties which enabled manipulative trading strategies or the exercise of market power during the relevant period. Dr. Fox-Penner identifies a number of specific contracts, including contracts between Enron and the following counter-parties: Powerex, Glendale, Pasadena, Energy West, El Paso Electric, Puget Sound, the Colorado River Commission, Las Vegas Cogen, Avista, CFE, and Valley Electric.[237] Dr. Fox-Penner focuses in particular on the contract between Enron and Glendale, that, together with evidence that Glendale trained its traders in Enron-style trading strategies such as Fat Boy, clearly demonstrates a concerted effort to manipulate markets.[238] Later, Glendale subsequently entered into a similar agreement with another counter-party, Coral, where additional documentation once again reveals an intent to conspire to manipulate markets.[239]

Dr. Fox-Penner concludes it is likely that Enron used its contractual relations systematically to engage in trading strategies that at least some of its long-term contractual partners knew about.[240] This conclusion is supported by internal Enron documents.[241] The web

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[236] Exh. No. CA-105 at 39. *See, also,* Fox-Penner Testimony, Exh. No. CA-1 at 51.

[237] *Id.* at 43.

[238] *Id.* at 43-44.

[239] *Id.* at 45.

[240] *Id.*

[241] *See id.*

spun by Enron has also been the subject of the Commission's own investigation in Docket No. PA02-2-000, and the individual investigatory proceedings in Docket Nos. EL02-113-000, EL02-114-000, and EL02-115-000.[242]

In addition to the Enron documents, Dr. Fox-Penner notes the discovery of additional contracts between Sempra and EWEB; between PNM and a variety of entities, including a parking arrangement with Powerex; between Avista and Riverside; between Avista and Chelan; and between Avista and Turlock Irrigation District (TID), that, among other things, provided for parking, transmission use, or other services that could be used to facilitate manipulative strategies.[243] Dr. Fox-Penner also notes other agreements between LADWP and Powerex, Coral and Colton, and NCPA and Enron, that were available only in draft form or were evidenced by references in other record materials.[244] While it could not be shown, based on the limited and obstructed discovery available, that these agreements were definitely used to collusively manipulate markets, three agreements were identified by Dr. Fox-Penner as raising serious concerns on their face:

- An Avista-Riverside agreement which called for extensive sharing of competitive information and includes a retail non-compete provision.[245]
- An Avista-TID agreement which provided for information sharing and strategic cooperation.[246]

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[242] *See El Paso Electric Company, Enron Power Marketing, Inc. and Enron Capital and Trade Resources Corporation*, 100 FERC ¶ 61,188 (2002); *Portland General Electric Company and Enron Power Marketing, Inc.*, 100 FERC ¶ 61,186 (2002); and *Avista Corporation, Avista Energy, Inc., Enron Power Marketing, Inc. and Portland General Electric Corporation*, 100 FERC ¶ 61,187 (2002), respectively.

[243] Fox-Penner Testimony, Exh. No. CA-1 at 46.

[244] *Id.*

[245] *Id.* at 46-47.

- A Sempra-Coral agreement under which Sempra provided Coral with advance information regarding the status of one of its power plants.[247]

b. Two-Party Agreements -- Profit Sharing

Another category of agreement that raises serious questions of anti-competitive collaboration involves profit-sharing arrangements. Profit sharing arrangements could be contained in contracts, or could be verbal deals to, for example "share the upside" of a real-time transaction.

For example, the Enron-Glendale contract above contained a profit-sharing arrangement that provided that revenues from the sales of surplus power would be split seventy-five percent Glendale and twenty-five percent Enron.[248] However, other documents revealed that when engaging in Fat Boy strategies, the parties would share the profits equally.[249]

The transcripts of trader calls between Public Service of Colorado (PSCo) and Mirant contain a number of references to "splitting" or "sharing" the "upside."[250] Mr. Gregg Oetting for Mirant indicated during deposition he didn't think there was a typical way to structure profit sharing deals.[251] Mr. Murphy, formerly with PSCo, indicated that in order to share or split the upside it was generally necessary to know the sale price which, less costs, would provide the margin that was available to share.[252] However the deal might be structured, both parties would

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[246] *Id.* at 47.

[247] *Id.* at 48.

[248] *Id.* at 43.

[249] *Id.* at 43-44.

[250] Exh. No. CA-204 at 18, 27, 28-29, 31.

[251] Exh. No. CA-256 at 138-139.

[252] Exh. No. CA-255 at 103.

have a strong interest in maximizing the sale price in order to maximize the shared profits -- the "upside" of the deal.

c. Two-Party Agreements -- Facilitation

Another category of anti-competitive transaction are those arrangements, which may or may not be memorialized in a contract, that facilitate, for a fee, potential manipulative behavior. Indeed, to the extent that there was manipulation involved on one side of the transaction that provides a benefit to the passive participant, this is a classic case of tacit cooperation. Such facilitation could, for example, involve parking energy, or sleeving energy, or agreeing to schedule energy on behalf of another party. While these arrangements may be benign in some circumstances, they may also involve efforts to manipulate markets through the variety of trading strategies that are discussed in detail by Dr. Fox-Penner.[253] One example of such a "facilitating" arrangement was described in a November 10, 2000 e-mail from Mark Chamblee at Dynegy that discusses a "gentleman's agreement" with Williams that provided Dynegy with a guaranteed $5 of revenue from a "Williams Np15 avg of dec's -$5 play."[254] In this e-mail, Dynegy is keenly interested in maintaining the revenue stream from Williams.[255] Again, this is the kind of coordinated action that facilitates the implementation of manipulative behavior.

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[253] Fox-Penner Testimony, Exh. No. CA-1 at 97-185.

[254] Exh. No. CA-313.

[255] *Id.*

Another example of coordinated dealing among traders involves "wash" trades of energy or natural gas. The record shows that Enron conducted thousands of natural gas wash trade transactions, including many with Reliant during December 2000.[256]

These transactions could also be arranged informally. Dr. Fox-Penner identifies one such arrangement between Enron and PacifiCorp, where Enron verbally characterizes the transaction as a buy-resell at Malin with the energy coming from the PX (*i.e.,* out of California) -- and going to the ISO (*i.e.,* back into California) -- a classic Ricochet transaction.[257] For its part in this particular transaction, PacifiCorp received \$5/MWh for each megawatt it bought from Enron and resold back to it.[258] PacifiCorp's complicity in this deal, and likely many similar deals, regardless of whether it is viewed as active or passive, nonetheless makes it a co-conspirator with Enron.

d. Information Sharing -- Trader Conversations

As detailed in the attached Declaration of John Phillips, only a relatively small subset of the trader conversations requested by the California Parties could be listened to and transcribed during the 100-day discovery period.[259] Many of the recordings requested were not made available during the discovery period, or were received only in the closing hours of discovery.[260] The importance of these recordings cannot be understated. When questioned about how he

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[256] Prepared Testimony of Michael J. Harris Ph.D, Econ one, Testimony, Exh. No. CA-15 at 11-12 (Harris Testimony).

[257] Fox-Penner Testimony, Exh. No. CA-1 at 124.

[258] *Id.*

[259] Declaration of John W. Phillips on Behalf of the California Parties (Feb. 28, 2003) (Phillips Decl.) ¶¶ 4-5.

[260] *Id.* at ¶¶ 6-8.

traded, Scott Connelly, a cash trader with Mirant during the relevant period, indicated that his deals were primarily done through on-line trading services or by telephone.[261] Since much of a trader's day is spent conducting business over the phone, access to those conversations, and the time and resources to listen to and evaluate them, is critical for understanding the scope of information sharing among traders. And indeed, from just the sampling of recordings reviewed to date, the scope of information sharing among traders is considerable. The record demonstrates that traders regularly shared among themselves competitive information regarding strategies and price, and that they were often aware of each others' manipulations of the market.[262]

In a December 31, 2002 page one article entitled "How Energy Traders Turned Bonanza Into a Historic Bust," the *Wall Street Journal* described the "Wild West atmosphere" in which traders with "[t]ight professional and social relationships . . . covered each other's backs in deals that seemed aimed more at increasing the volume of their business . . . than at achieving substantive economic goals."[263] Although the focus of the discovery in this case has not been to explore in detail the professional and social relationships of Western energy traders, enough evidence has emerged to suggest that the *Wall Street Journal* got it right.

Perhaps the best known series of trader telephone calls in this proceeding is a set of eight telephone transcripts between PSCo and Mirant, which primarily involve Steven Murphy for PSCo and Gregg Oetting or James Shandalov for Mirant and which were included in Xcel's May

[261] Exh. CA-172 at 32-33.

[262] Indeed, it is possible to take virtually any of the trader telephone transcripts included as an exhibit in this filing and use it as an example of anti-competitive or collusive behavior between the traders involved.

[263] Exh. No. CA-26 at 3-4.

23, 2002 submission in Docket No. PA02-2-000.[264] The discussions contained in these trader conversations clearly reflect not only the personal relationships between the traders, but also their willingness to exchange competitive information and discuss market conditions.[265]

Two examples of telephone conversations involving Reliant further serve to illustrate the competitive harm of information sharing among traders. In the first, a long conversation between traders who obviously knew each other well, on June 20, 2000, the trader for Reliant makes clear that Reliant's plan is to keep prices high by not running their plants and says "so you can use that any way you want."[266] Later the trader for the other company asks Reliant "how long do you think you're going to keep your plants down" and "what price are you aiming for."[267] We now know Reliant did indeed withhold capacity beginning on that day.[268] Two days later, on June 22, 2000, while Reliant's scheme was still in progress, a trader from Reliant, identified as Scott, tells David Redding of Mirant that they "kind of tested what the sensitivity was" of the market, following which there is laughter by Mr. Redding.[269] These communications of sensitive market information between traders are the telephone equivalent of the "nods and winks" of past years.

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[264] Counsel for Xcel provided a re-transcription of seven of the eight conversations. This re-transcription, along with a re-transcription of the eighth conversation provided at Mr. Murphy's deposition, are included for completeness in the record as Exhibit No. CA-235.

[265] *See* Exh. No. CA-204, *see also* Fox-Penner Testimony, Exh. No. CA-1 at 48-49.

[266] Exh. No. CA-249 at 6.

[267] *Id.* at 13.

[268] *See Fact Finding Investigation*, 102 FERC ¶ 61,108 (2002).

[269] Exh. No. CA-194 at 4.

e. Information Sharing -- Industry Organizations

Collusion could also occur in the context of industry organizations such as the Electric Power Supply Association (EPSA), the Western Power Trading Forum (WPTF), or the Independent Energy Producers Association (IEPA). An example of the potential for such collusive behavior is in a series of group e-mails sent from Lynne Church, Executive Director of EPSA, to various EPSA members, including Williams, Duke, Reliant, Enron, Dynegy, and Calpine and other generation owners, as well as IEP and WPTF. These e-mails sought information relating to prices that were then being negotiated for sales to the State of California to enable Ms. Church to provide pricing information to the press. However, Ms. Church's request was not limited to public information until she clarifies in the next to last e-mail in the group that "[t]here has been some concern expressed that my earlier message could be misconstrued in any future litigation . . . ." and requests parties to disregard her earlier messages and provide her only public information.[270] Nevertheless, the earlier exchanges prompted by the initial message with copies among many sellers necessarily had the effect of setting the bar higher for any price negotiations for any long-term contracts with any of the information sharing sellers.

Another example of the potential for collective action as part of an industry organization is shown in a group of letters sent by various parties and organizations in June 2000 in an effort to forestall implementation of reduced price caps then under consideration by the ISO board of directors.[271] Notable among these documents are letters sent on or about June 27, 2000, to Jan Smutny Jones in his role as Chairman of the Board of Directors of the ISO, and a letter to

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[270] Exh. No. CA-64 at 6.

[271] Exh. No. CA-335.

Governor Davis of California co-signed by Jan Smutny-Jones in his contemporaneous role as Executive Director of the IEPA. This latter letter was also signed by representatives of Enron, Reliant, Calpine, Duke, Dynegy, Southern Energy, and Williams, among others, and urged the Governor to oppose what was characterized as "fundamental and retroactive changes to ISO and PX pricing policies."[272] The former letters came from a variety of entities, including Williams, Dynegy, Reliant, and Duke.[273] While nominally directed to the Governor, it is clear that the actual intent of this joint generator action was to prevent the imposition of price caps. Given that it occurred less than six days after the Reliant withholding with knowledge of the ability to manipulate markets and exercise market power revealed on June 20-22, 2000, this was, in effect, a conspiracy to fix and maintain prices at levels which permitted exercise of market power. A letter from Southern Energy stating its opposition to price caps and referring to support of the reasons stated in the contemporaneous IEP letter is evidence of the coordination of efforts and true intent of the IEP latter.

Also included among these documents is a letter from WPTF, an organization that included a number of sellers in the California market, to Mr. Smutny Jones arguing against

[272] *Id.* at 10.

[273] In light of its January 31, 2003, Stipulation and Consent Agreement with the Commission, the June 26, 2000 letter from Reliant, just days after the withholding activities that were the subject of the Consent Agreement, is remarkable:

> In recent weeks, California's electricity system has been stressed to it limits . . . . These conditions caused short-term electricity prices to rise sharply. . . . Overall, however, it appears that the markets functioned as designed during these periods.

Exh. No. CA-335 at 23.

lowering price caps.[274] The WPTF letter included the threat that if price caps were imposed power could be diverted from California to markets outside California.[275]

Joint action in the context of an industry organization, to the extent it is requesting anti-competitive action by the government, is protected by the *Noerr-Pennington* doctrine.[276] *Noerr-Pennington*, for example, may protect the joint letter signed by Mr. Smutny Jones to the Governor since it sought assistance from the executive branch of government within California it is less clear that it would protect that communication if its real intended effect was to manipulate the ISO Board vote on price caps. Less protected are communications such as that by WPTF to the ISO board advocating a position clearly designed to maximize the prices its members could obtain in California markets or similar letters from generators. The ISO board in this circumstance was not acting as a governmental or even quasi-governmental entity. The ISO, a non-profit, public benefit corporation organized under the laws of California, at this time was, by its own assertion, simply a buyer of energy that could set the price it was willing to pay.[277] The Commission concurred in this view.[278] Given that the ISO at this time was in the same posture

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[274] Exh. No. CA-335 at 28.

[275] *Id.*

[276] The *Noerr-Pennington* exception essentially holds that two or more persons cannot under the First Amendment of the U.S. Constitution be prohibited from associating together in an attempt to persuade the legislature or the executive to take action with respect to a law that would produce a restraint or a monopoly. *See Eastern R. R. Presidents Conf. v. Noerr Motor Freight, Inc.,* 365 U.S. 127 (1961), *UMW v. Pennington*, 381 U.S. 657 (1965).

[277] *See Morgan Stanley Capital Group, Inc. v. California Independent System Operator Corp*., 92 FERC ¶ 61,112 at 61,430 (2000). The ISO website contains the ISO's response to this complaint proceeding, including the correspondence received regarding the price cap vote on June 28, 2000, the transcribed minutes of the ISO Board meeting on that date, and other materials. *See <http://www2.caiso.com/docs/2001/01/12/2001011217175728711.html>*.

[278] *Id.* at 61,431 (holding the ISO has no more or less ability to procure capacity and energy than any other buyer of these services).

as any other purchaser, and that the decision sought by WPTF was not a decision by a governmental entity, concerted actions directed at influencing that decision would not be protected under *Noerr-Pennington*. Thus, WPTF's letter could potentially constitute an antitrust violation. This would also be true of other joint action during this period seeking to directly influence the ISO's board, including coordinated letters by generators as part of a joint campaign to maintain market power.

f. Information Sharing -- Proprietary Outage Information.

In a new development during the past 100 days, it was discovered that certain sellers had access to proprietary outage information that aided and abetted the exercise of market power. This information sharing of outage information is addressed in detail above. Not only is this evidence of explicit collusion among the involved sellers, it also supports the conclusion that collusion was widespread and occurred in numerous forms and via many channels.

2. The record is replete with other evidence, not detailed herein, showing collusive behaviors

At every turn, additional evidence of collusive behavior emerges from the record developed in this case. This filing and the associated testimony cannot begin to exhaust the evidence available to demonstrate the breadth of the coordinated and collusive behavior among sellers in Western markets during this period. As noted by Dr. Fox-Penner:

> In a market that was highly vulnerable to market power exercise and manipulation, there is also significant evidence that some sellers had access to special information that facilitated coordination. Within the limited time frame afforded by the Commission to conduct discovery I could not fully explore the extent or impact of coordinative behavior. However, the evidence is consistent with and supports my general conclusion that prices throughout the period were inflated to levels beyond those that would have existed in a competitive market, and also warrants a

> much more thorough examination of coordination in these markets during this time period.[279]

3. The generators and marketers identified in this proceeding are the regulatory equivalent of co-conspirators and should be subject, at a minimum, to the remedies recommended by the California parties

Although conspiracy and joint and several liability are legal concepts that are not often raised in Commission proceedings, never has there been a proceeding where the scope and variety of misbehavior was so broad, where the profits were so great, and, as we now know, where there was a such a high level of collusion among market participants. While this collusion was in some cases explicit and in other cases tacit, it all had the same goal: to fraudulently manipulate the markets to maximize profits, or to knowingly and opportunistically take advantage of such manipulation to maximize profits.

Dr. Fox-Penner points out the economic inefficiency inherent in joint action in the market setting:

> Q. From the economic standpoint, what is the difference between unilateral or single-seller uncoordinated withholding and withholding coordinated among more than one seller?
>
> A. A withholding of supply or market manipulation that is coordinated among more than one seller has a different interpretation in economics than does unilateral market power. When a single firm attempts to exercise market power without the active or tacit cooperation of any of its competitors, in order to promote effective competition it is necessary to examine such market power exercise further to determine whether it did or did not realistically promote economic efficiency and other objectives.
>
> When withholding or manipulation occurs through coordinated seller actions there is generally no need to further examine the situation to distinguish between pro and anti-competitive conduct. <u>There is virtually no efficiency justification for allowing two competitors to *collectively* withhold output or manipulate markets</u>.[280]

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[279] Fox-Penner Testimony, Exh. CA-1 at 56.

[280] *Id.* at 42 (emphasis added).

The legal counterpart to the economic concern expressed by Dr. Fox-Penner with collective action can be found in the elements of conspiracy as developed through the common law of civil conspiracy or in Sherman Act jurisprudence. The elements of a civil conspiracy claim include: (1) an agreement between two or more persons; (2) to participate in an unlawful act, or a lawful act in an unlawful manner; (3) an injury caused by an unlawful overt act performed by one of the parties to the agreement; (4) which over act was done pursuant to and in furtherance of the common scheme.[281] A finding that there is collusion or a conspiracy does not require the active participation of all the conspirators in the unlawful activity.

Once a conspiracy has been established, the liability for the conduct of one conspirator may be attributed to any other co-conspirator, resulting in joint and several liability among the co-conspirators. As noted by Circuit Judge Wald in *Halberstam*:

> [O]nce the conspiracy has been formed, all its members are liable for injuries caused by acts pursuant to or in furtherance of the conspiracy. A conspirator need not participate actively in or benefit from the wrongful action in order to be found liable. He need not even have planned or known about the injurious action . . . so long as the purpose of the tortious action was to advance the overall object of the conspiracy.[282]

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[281] *Halberstam v. Welch*, 705 F.2d 472, 477 (D.C. Cir. 1983).

[282] 705 F.2d at 481 (emphasis added). *Halberstam* involved an action for wrongful death against a burglar who shot and killed one of his victims, and the burglar's live-in girlfriend. The girlfriend knew about defendant's activities and helped him dispose of stolen goods and manage his finances, but did not assist in the killing or the burglaries. The court held her liable, *inter alia*, as a co-conspirator based on the reasoning quoted above. *See also Riddell v. Riddell Washington Corp.*, 866 F.2d 1480, 1493 (D.C. Cir. 1989) (recognizing that purpose of civil conspiracy claim "is to serve as a device through which vicarious *liability* for the underlying wrong may be imposed upon all who are a party to it, where the requisite agreement exists among them," citing *Halberstam*) (emphasis added); *International Telecommunications Satellite Orgs. v. Colino*, 1992 WL 93129, *12 (D. D.C. April 15, 1992) *amended on other grounds*, 1992 WL 151809 (D. D.C. June 9, 1992) (granting summary judgment to plaintiff on conspiracy claim and observing that "[o]nce it is determined that a conspiracy had been formed, all parties to the conspiracy are civilly liable for injuries caused by acts pursuant to or in furtherance of the conspiracy, quoting *Halberstam*); *comment a. to Restatement (Second) of Torts* § 876(a) ("Whenever two or more persons (continued)

Conspiracy in restraint of trade is also prohibited by Section 1 of the Sherman Act which provides, in pertinent part, that:

> Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.[283]

15 U.S.C. § 1 (2000). Under Sherman Act case law, "circumstantial evidence of consciously parallel behavior;" *i.e.*, tacit conspiracy, may be considered when evaluating the existence of a conspiracy.[284]

The Commission has held that while it is not bound by antitrust precedent, it does consider antitrust issues as part of its public interest evaluation.[285] And, although the Commission does not often address remedial issues relating to conspiracy, nonetheless that body of law, coupled with the extensive and growing evidence of explicit and tacit collusion among sellers, provides an additional and compelling public interest basis for a decisive remedial action consistent with the recommendation of the California Parties.

L. There Is Evidence that Prices for Emissions Credits Were Manipulated in a Manner Similar to Prices for Natural Gas and Electricity

Proposed Finding of Fact: Dynegy, AES, and others appear to have engaged in "wash" trades in the RECLAIM market in July and August 2000.

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commit tortious acts in concert, each becomes subject to liability for the acts of the others, as well as for his own acts").

[283] 16 U.S.C. § 1 (2000).

[284] *Theatre Enterprises, Inc. v. Paramount Film Distributing Corp*., 346 U.S. 537, 540-41 (1954).

[285] The Commission has explained that it "is not responsible for enforcing the antitrust laws. Rather, [its] responsibility is to consider the pertinent antitrust statutes and to weigh those considerations along with other important public interest considerations." *Entergy Services, Inc.,* 64 FERC ¶ 61,001 at 61,012 (1993), *citing, inter alia, Gulf States Utilities Co. v. FPC,* 411 U.S. 747, 760 (1973); *Northeast Utilities Service Company v. FERC,* 993 F.2d 937, 947 (1st Cir. 1993) (the Commission must include antitrust considerations in its public interest calculations under the FPA , but it is not bound to use antitrust principles when they may be inconsistent with the Commission's regulatory goals).

In his examination of the publicly-available RECLAIM trading credit (RTC) data base maintained by the South Coast Air Quality Management District (SCAQMD), Dr. Richard McCann noted six sets of paired trades involving Dynegy and six different companies from mid July to mid August 2000.[286] These trades differ from the definition of wash trades that first arose in the context of the electricity crisis -- where two entities traded a like amount of natural gas or electricity at the same price. The Dynegy RTC trades generally involved one party selling a larger amount of RTCs at a lower price and the other party buying a smaller amount at a higher price, so that the total dollar amount expended by each party is approximately equal, resulting in a net cash transfer of zero. In all but one of these trades, Dynegy paid the higher price. The net effect was that Dynegy gave several of these other parties RTCs at a heavily discounted price, or even for free, to gain the benefits from the transaction. Among these trades, Dynegy and AES also sold each other large, but differing, amounts of RTCs at differing prices, so as, with the other trades involving Dynegy, the total dollar amount of the two transactions netted to approximately zero.[287]

The five wash trades reported in August represented thirty percent of the trades and forty-seven percent of the transaction volume during the two-week period beginning August 14, 2000. This represents a greater proportion of the market than the reported wash trades in the gas and electricity markets that have raised concerns at the Commission.[288]

These transactions could have had two intended effects:

[286] Prepared Testimony of Richard J. McCann Ph.D, Testimony, Exh. No. CA-11 at 48:10-13 (McCann Testimony). The evidence is contained in McCann Appendices, Exh. No. CA-12 (Appendix K) at 45.

[287] McCann Testimony, Exh. No. CA-11 at 48:13-49:9.

[288] McCann Testimony, Exh. CA -11 at 48:9-14.

(1) To “walk” up the RTC “market price” from $10 to over $30 in a short period; and

(2) To create the false impression that the RTC market was active, and thus that the prices were valid indicators of market value.

Dynegy could benefit from this rise in RTC prices in at least two ways. First, the increased RTC “market price” allowed Dynegy to claim a greater “mark to market” value for both its free allowance and its previously purchased reserve of RTCs. This inflated Dynegy’s assets value -- a practice now well documented at Enron, among other corporations. Second, the higher RTC “market price” increased the apparent marginal cost for the generating capacity in the SCAQMD, which, in turn, increased the overall market-clearing price. Dynegy was able to directly recover this benefit through sales from its other plants in the SP15 zone, Encina (a.k.a. Cabrillo I) and the Cabrillo II complex of combustion turbines. At the same time, Dynegy could harm its competitors who also had most or all of their generation in the SCAQMD, such as AES/Williams and LADWP, who needed these credits. If Dynegy could move the apparent price of RTCs through wash trading, then Dynegy’s competitors would face greater production costs and would be disadvantaged relative to Dynegy. For these reasons, Dynegy may have been willing to pass a premium to the counterparties in these transactions by selling additional RTCs at a lower price than that at which Dynegy was buying at as a means of inducing them to participate. Dynegy has not provided any information that would explain these transactions or place them in a different light.[289]

Unfortunately, Dr. McCann could not discern from currently available information whether other similar “wash” trades or other market gaming activities were occurring because the transactions were often opaque, frequently passing through a broker who combined or

[289] *Id.* at 49:15-51:2.

separated purchased RTCs into various batches to be sold on consignment. The RTC market was not regulated in the same manner as other commodities or securities, and, until May 2001, the buyer only had to register a transaction with the SCAQMD if the RTC was used, and then, only data on the final transaction was required. Intermediate transactions were not required to be registered. The widespread practice of selling RTCs on consignment through brokers also obscures the trail of transactions that might reveal further activity similar to Dynegy's actions.[290] At a minimum, the Commission should find that additional investigation into trading irregularities in the RTC market occurring in 2000 and 2001 is warranted, before allowing sellers a dollar-for-dollar offset to their refund obligations.[291]

M. Seller Withholding, Not Buyer Underscheduling, Led to Forced Reliance on the Real-Time Market

Proposed Finding of Fact: The withholding of supplies by sellers in the PX day-ahead and day-of markets caused the ISO to be unable to serve ninety-five percent of its load prior to the real-time market. If sellers had bid to supply generation in the PX markets at reasonable prices, no significant underscheduling would have occurred. If buyers in the PX markets had submitted inelastic demand bids, the net cost of power to the IOUs would have increased by $6.758 billion in May-September 2000 and the underscheduling would still not have been eliminated.

1. Sellers withheld enormous quantities of energy from the day-ahead market in the summer of 2000

As prices soared in California, sellers attempted to depict the crisis as the result of deliberate decisions by the buyers -- particularly the IOUs -- to underschedule load in the PX markets and to take the risk of purchasing in the ISO real-time market. Repeated studies by ISO and PX market monitors since 1998 had shown that past similar allegations lacked a basis in fact.

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[290] *Id.* at 51:3-13.

[291] *Cf., July 25th Order,* 96 FERC at 61,521.

However, the accusing sellers evidently wanted to create confusion and to distract attention from their own activities.

For example, transcripts of Reliant trader conversations, recently released in conjunction with the Commission's settlement with Reliant, pursuant to which Reliant will pay $13.8 million for withholding behavior, provide a stark contrast to the same company's public statements in 2000. The transcripts reflect the following statement in a June 20, 2000, conversation:

> Reliant Trader 2: "Buy dailies and then shut down all the plants…"

Followed immediately by:

> Reliant Trader 2: "And then that way we going to put out that we are short NOx, we're short capacity factor."[292]

The first statement refers to Reliant's plan to shut down plants, while the second outlines the cover stories: claims of a shortage of NOx credits necessary to operate the plant and concerns over Reliant's ability to meet daily obligations based on plant performance (short capacity factor).

Reliant's John Stout followed the script in testimony to the House Committee on Energy and Commerce on September 11, 2000. In addition to claiming that Reliant had "a lot of units that are constrained in how much they operate due to air emission constraints" and arguing that Reliant would have taken too great a financial risk if it had sold too much of its power in the day-ahead market (the short capacity factor quoted above), Mr. Stout also attacked buyers' bidding behavior as "imprudent."[293] He did not mention to Congress the withholding behavior for which Reliant has now agreed to pay $13.8 million.

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[292] Exh. No. CA-52 at 25.

[293] Exh. No. CA-228 at 2.

Despite such statements by sellers claiming that load underscheduling in the PX day-ahead market contributed to the energy crisis, and that their own strategies were merely creative attempts to help the ISO in response, the facts show that supply withdrawal from the day-ahead market was the real cause of underscheduling. What occurred in the summer of 2000 was that sellers in the California markets, as a group, withdrew large volumes of power from the PX day-ahead market and forced buyers to resort to the ISO real-time market to acquire necessary power supplies at exorbitant prices. Dr. Gary Stern, analyzed bidding practices in the PX markets in 2000, and demonstrates in his testimony that, far from buyer underscheduling, the PX day-ahead market was characterized by an extraordinary level of seller "underoffering."[294] That is, sellers in the California markets, as a group, offered far less power in the PX market in the summer of 2000 than they had in corresponding months in 1999. The gap, which began in June 2000, grew to 6,000 MW per day in July 2000, then 8,000 MW per day in August, and again 6,000 MW per day in September.[295]

Dr. Stern aggregated PX day-ahead bid curves for a specific hour over the weekdays in each month from May 1999 through September 1999 and also between May 2000 and September 2000. For each entity examined, he calculated a net supply curve by subtracting its bids to buy power from its bids to sell power. He then averaged each of the net supply curves for each entity for Hour Ending 16 for each of the weekdays in the month and compared monthly aggregate net supply curves for corresponding months in 1999 and 2000.[296]

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[294] Prepared Testimony of Dr. Gary A. Stern, Exh. No. CA-3 at 31-45 (Stern Testimony).

[295] *See* Stern Testimony, Exh. No. CA-3 at 25.

[296] *See id.* at 8.

Dr. Stern's study shows that both physical and economic withholding in the PX day-ahead market was the standard for sellers, with some exceptions. Duke, for example, actually increased the amount of supply it bid into the day-ahead market in 2000 as compared to 1999. However, Dynegy, Enron, MEICO, Mirant, Powerex, and Williams all significantly reduced offers into the market. Reliant reduced offers at low price levels, but increased them at higher levels. Sellers other than these major firms also contributed, in the aggregate, to the reduction.[297] Nor can the overall reduction be attributed to fundamental factors. Dr. Stern tested whether sellers made more supply available during the peak afternoon hours than in morning hours, consistent with limitations on power availability for either run hours or hydro conditions; and also whether they made less power available in September, consistent with potential environmental constraints or water supply. In both cases, the answer was negative. About 2,000 fewer MW were offered to the PX day-ahead market in the afternoon -- during peak conditions -- than were made available during the morning hours. The fact that less power was offered during the afternoon period, when prices were consistently higher than the early morning hours, is a clear indication of intentional withholding from the PX day-ahead market during tight supply conditions.[298]

Further, as much as 3,000 MW more power was made available in September 2000 than in August of that year, disposing of any argument that NOx permits or hydro conditions were causing supply shortfalls (factors that would lead to fewer hours of available supply in

[297] *See id.* at 24.

[298] *See id.* at 26-27.

September compared to August). Again, the data are consistent with the systematic withholding of power by sellers, clear evidence of the exercise of market power.[299]

Although Dr. Stern focused his analysis principally on May through September 2000, he found that the same trends persisted later in 2000. For Hour 16, there were 6,000 to 9,000 MW withdrawn from the supply offers at prices in the $100-$200 range in December 2000 as compared with December 1999. Even at prices as high as $300, well above the marginal cost of production, there remained an average gap of 3,000 MW.[300]

2. Market monitors found that underscheduling was the result of insufficient supply in the real-time market, not of buyer behavior

Even before the summer of 2000, independent market monitors concluded that withholding of supplies by generators and marketers was the primary cause of the California utilities' inability to purchase power at reasonable prices in the PX. In 1998, the PX's and ISO's independent monitoring units both investigated the problem of underscheduling. They concluded that high prices observed in the PX's day-ahead market were more the result of the withholding practices of sellers (underoffering of supply) than of underbidding of demand.[301] In 1999, the PX Market Monitoring Committee (MMC) reported to this Commission that:

> [D]uring the hours when end-use demand exceeds offered supply in the PX market . . . the supply side has substantial market power. . . . [B]ecause of the shortfall of supply, buyers (principally IOUs) are forced to buy in the real-time market. This has given rise to a controversy about so-called "load underscheduling" in the PX market; the claim is made that load servers are shifting their demand to the real-time market. . . . <u>[I]t would be more accurate to say that supply had been "underoffered" in such hours</u>. No matter

[299] *See id.* at 28-29.

[300] *See id.* at 29-30.

[301] *See* Exh. No. CA-107 at 1.

> what price buyers offered in the PX market, they could not have met all their needs; not enough supply was offered. Increasing their demand bid prices would serve only to increase the PX market-clearing price, with negligible effect on quantity.[302]

Once again, in the summer of 2000 the PX reported to the California Electricity Oversight Board that, although buyers were willing to purchase more power, and at higher prices, there was as much as 10,000 MW less gross supply offered in the PX market in 2000 than in 1999. Beyond any doubt, the cause of increased real-time volumes was the lack of supply offered in advance of real-time, and not the bidding behavior of buyers. Similarly, the ISO's May-June 2000 Report on Energy Market Issues and Performance stated:

Recent PX market prices and volumes -- as well as sample aggregate supply and demand curves released by the PX -- indicate that despite recent "shifts" in aggregate demand (reflecting an increased willingness-to-pay in the forward markets), the ability of buyers to increase purchases in the PX Day Ahead markets is severely limited by the nearly vertical slope of the PX supply curve around the 30,000 MW level.[303]

Finally, the PX ISO Market Surveillance Committee (MSC) suggested that Commission-approved changes in the Replacement Reserve rules provided an incentive for generation owners to offer less supply in the day-ahead market in 2000, by permitting them to receive an effective price equal to double the real-time price cap for Replacement Reserve energy.[304] The MSC stated:

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[302] *Second Report on Market Issues in the California Power Exchange Energy Markets* at 47, filed in Docket Nos. ER98-2843-006, *et al.* (March 10, 1999), Exh. No. CA-148 at 6 (emphasis added).

[303] California ISO Department of Market Analysis, Report on Energy Market Issues and Performance: May-June 2000 at 25 (Aug. 10, 2001), Exh. No. CA-231 at 2.

[304] California ISO Market Surveillance Committee, An Analysis of the June 2000 Price Spikes in the California ISO's Energy and Ancillary Services Markets, September 6, 2000, at 22, Exh. No. CA-232 at 2.

> During hours with very high load, the Replacement Reserve penalty scheme pays generation (that is virtually certain to be providing energy in real-time) not to schedule in day-ahead and hour-ahead markets. This Replacement Reserve payment to generators is financed through the penalty that is charged to SCs that consume more energy in real time than they schedule on an hour-ahead basis.[305]

More money was spent on Replacement Reserves during the second week of June in 2000 than during the entire year of 1999.

3. Sellers leveraged their withdrawals from the day-ahead market by selling at exorbitant prices in the real-time market

Supply offers to the PX day-ahead market determine the amount of capacity that is available for buyers to acquire on a day-ahead basis. If the sellers either do not offer enough power for purchase (physical withholding), or offer power, but at excessive prices (economic withholding), then buyers effectively have to choose between either meeting their demand in the day-ahead market at unreasonable prices, or taking their chances for some portion of their load in the ISO's real-time market.

Sellers benefited greatly from the withdrawal of supply in the PX day-ahead market, and not just from the effects of withdrawal in that market. To the extent that a buyer could not satisfy its needs in the day-ahead market, it was often forced to resort to the ISO's real-time market. Although buying in this market carried extra risk and was subject to seller market power, buyers had no real choice in the matter.

For much of 2000, the amount of supply bid into the PX was not sufficient to allow buyers to meet their load obligations without substantial purchases in the hour-ahead, real-time and OOM markets. Dr. Stern demonstrates that the "bid adequacy" ratio -- that is, the ratio of

[305] *Id.* at 23, Exh. No. CA-232 at 3.

supply bid into the PX market at a given price to the ISO's load forecast -- was below 1.0 for much of the summer of 2000 at a bid price at or below $750/MWh. That indicates supply-side underscheduling in the market.[306]

Dr. Stern also points out that during most of the crisis period, the ISO was able to locate sufficient supplies of power and maintain service. This implies that there was sufficient capacity available to meet load, but that not all of this capacity was bid into the day-ahead market. The fact that the amount of supply bid into the PX, even at the high price of $750/MWh, was below expected ISO load suggests that suppliers had pulled back from the day-ahead market, and that the reason that the amount bid into the day-ahead market fell so far short of load was because of under-offering by suppliers.[307]

Dr. Stern also draws a clear connection between the withdrawal of supply from the PX markets and the market manipulation "games" described in the Enron Memorandum and explained in Dr. Fox-Penner's testimony. Most of these games -- which were practiced not only by Enron, but by many other sellers -- had as their goal the withdrawal of supply from the PX market and its sale in the real-time market, where sellers could exercise market power to receive exorbitant prices. Some games involved the creation of congestion or the threat of congestion in the PX market bidding process, with the result that IOU buyers could not satisfy their needs in

[306] *See* Stern Testimony, Exh. No. CA-3 at 37-40. When the bid adequacy ratio is 1.0 or greater, buyers can potentially satisfy all of their load obligations through the PX day-ahead market at some price equal to or less than $750. On the other hand, when the ratio falls below 1.0, demand bids even at $750 will not allow buyers to meet their expected load obligation. This is the case regardless of the form of bidding strategy (*e.g.*, price responsive, inelastic) undertaken by the buyers. If the ratio is less than one, there simply is not enough supply bid into the PX to meet load. *Id.*

[307] *See id.* at 39.

that market and had to resort to the real-time market for a greater proportion of their load than otherwise would have been the case.[308]

4. Prices in the PX day-ahead market would have been reasonable if sellers had not withheld power

Underscheduling is the result of supplier refusal to offer power at just and reasonable prices (economic or physical withholding) and not of buyers' load bidding strategies. Dr. Stern performed an analysis of PX market-clearing prices and quantities that would have resulted if the suppliers had offered their power into the PX day-ahead market at reasonable prices. To do so, he reconstructed the PX supply curve, capping all bids using the MMCP formula adopted by the Commission for the refund period calculations. Thus, for purposes of this hypothetical study, no supplier bid exceeded the heat rate of the least efficient unit times the spot gas price based on the gas price index used in the refund case to date, plus $6/MWh for O&M.[309]

Focusing on the 208 hours during which the ISO declared a system emergency in the May through September 2000 time period, Dr. Stern found that in 201 of the 208 hours (96.6 percent), there was insufficient supply offered to the PX market to meet the needs of the buyers. In these hours, load cannot be held responsible for the underscheduling because there was no load bid that could have avoided the underscheduling.[310] He then examined the seven of 208 hours when the market did clear based on supply bids mitigated at the MMCPs, *i.e.*, hours in which sufficient supply was bid into the market to meet buyers' needs. For these seven hours, he

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[308] *See id.* at 50-58.

[309] Even if an individual bidder bid higher than its heat rate times gas price index plus O&M adder, that bid would not be altered unless it exceeded the market MMCP as established by the most costly unit in the market.

[310] S*ee id.* at 64. Of course, there was no overall shortage; suppliers simply withheld their output from the PX market and sold it to the ISO either as OOM or in the real-time market.

examined the impact on the market-clearing quantities in the PX day-ahead market of reasonable offers by sellers. The results show that that if sellers had offered the same supply, but capped their supply bids at reasonable prices as determined by the MMCP calculation, an average of ninety-one percent of the load would have been served in these hours. This shows that the issue of "load underscheduling" evaporates when supply is offered at reasonable prices.

5. No change in buyer bidding practices could have produced an adequate supply of power in the PX day-ahead market

The independent market monitors concluded that withholding of supplies by generators and marketers was the primary cause of the California utilities' inability to purchase power at reasonable prices in the PX, and that buying both day-ahead and real-time was a major way for the utilities to protect themselves from even higher prices.[311]

Dr. Stern notes that Edison and PG&E have convincingly shown that they did not adopt a policy of seeking to acquire supplies in the real-time market.[312] Rather, much of the power they acquired in the real-time market was the result of securing less than they had bid into the day-ahead market. For example, on June 27, 2000, Edison acquired 16.5 percent of its supply in the real-time market. Seventy-eight percent of this real-time market amount was due to supply shortfall and congestion management in the PX day-ahead market; the remaining twenty-two percent -- 3.5 percent of Edison's total load -- was due to forecast error.[313]

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[311] *See id.* at 35, 44-45. *Second Report on Market Issues in the California Power Exchange Energy Markets* at 47-48, filed in Docket Nos. ER 98-2843-006, *et al.* (March 10, 1999), Exh. No. CA-148 at 6-7.

[312] *See* Stern Testimony, Exh. No. CA-3 at 42-44.

[313] *See id.* at 46-48.

Dr. Stern analyzed what would have happened if Edison had been willing to pay any price to procure power in the PX day-ahead market on June 27, 2000, *i.e.*, if Edison had tried to purchase the full forecasted load at all price levels up to the highest limit of $2,500.00. Replacing the original Edison demand bid curve with a vertical demand bid curve,[314] he found that if Edison had offered to pay any price to purchase its full forecast Hour 16 load, the PX day-ahead market for Hour 16 would have increased by only 65 MWh (approximately 0.2 percent of total PX supply), due to limited supply offers. Correspondingly, the ISO real-time market volume for that hour would have been reduced by the same 65 MWh, less than one percent of that market's size. Further, the vertical demand curve would have increased the cost to Edison for Hour 16 alone by over $1.1 million.[315]

Dr. Stern also reconstructed the demand and supply curves used by the PX during the May through September 2000 period in order to analyze what would have happened if demand had been willing to pay any price in the PX day-ahead market to schedule in advance of the ISO's real-time market. He assumed that the three IOUs submitted vertical demand curves, such that they were willing to pay up to the PX administrative limit of $2,500/MWh to have their demand met in the PX day-ahead market, and also assumed that the demand bidding would be as a price taker in all hours.[316]

As noted previously, in many hours there was insufficient supply offered into the PX day-ahead market to meet the demand at any price. The market price would have reached

[314] In fact, Dr. Stern points out, such a vertical demand curve would have violated the PX bidding rules. *Id.* at 49.

[315] *See id.* at 48-50.

[316] *See id.* at 66.

$2,500/MWh in those hours, and demand would have been rationed at that price. Even in the hours when sufficient supply existed to clear the market, Dr. Stern found that the clearing price would have been substantially higher. Overall, the effect of vertical demand bidding in the day-ahead market would have increased the net cost of power to the IOUs by $6.758 billion in the five-month period, a catastrophic change. Thus, even the most extreme change in bidding behavior by the major buyers would have worsened, not alleviated, the crisis, by adding billions in costs to California consumers.[317]

In summary, there was a huge reduction in the quantity of power offered by sellers into the PX day-ahead market beginning in June of 2000, with the result that the 100 buyers in that market could not acquire sufficient power to meet their forecast demand. To the extent large real-time market volumes developed in the summer of 2000, that underscheduling effect cannot be attributed to load, since load simply could not buy what was not offered in the PX day-ahead market. Rather, sellers shifted supply from the day-ahead market to the real-time market, and engaged in a variety of related manipulative activities, to extract unjust and unreasonable prices.

N. California Border Natural Gas Price Indices Were Manipulated

Proposed Finding of Fact: The border gas price indices currently used in the refund calculations pursuant to the *July 25th Order* were manipulated and are not reliable.

In *California Parties' Comments on Method for Determining Natural Gas Prices For Purposes of Calculating Refunds,* previously filed on October 15, 2002, in Docket Nos. EL00-95-045 and EL00-98-042 (*October 15th Comments*), the California Parties demonstrated that the California border indices for natural gas should not be used for purposes of calculating the MMCP. The California Parties will not reiterate the arguments and evidence presented in that

[317] *See id.* at 67-70; *see also* Exh. No. CA-148 at 6-7.

filing. However, the California Parties are presenting herein additional testimony and exhibits, based on post-October 15, 2002 developments, in further support of the proposed finding of fact that the California border price indices are not appropriate for use in this proceeding.

Exhibit Nos. CA-15 and 16 comprise the direct testimony and exhibits of Dr. Michael J. Harris. As discussed in detail in that testimony, since October 15, 2002, there have been a number of developments that bear on the issues addressed in the *October 15th Comments*. In particular, Dr. Harris discusses:

- New admissions by major energy companies that their employees knowingly provided false information to the reporting publications;
- New admissions by employees of the reporting publications themselves that they were aware of the prevalence of misreporting of prices by energy companies long before the Commission Staff issued its August 2002 Report;
- Criminal indictments for false reporting;
- Evidence relating to gas prices and indices obtained during the 100 days of discovery in this case;
- Additional information derived from other investigations;
- Recent Commission Staff reports, including:
    - the 2003 Natural Gas Market Assessment; and
    - a January 15, 2003 presentation by the Commission Staff regarding the appropriateness of using published price indices in the context of pipeline rates.

Dr. Harris also includes two exhibits to his testimony which comprise an expanded calculation of the Staff's alternative pricing methodology, with refinements proposed by the

California Parties in the *October 15th Comments*. Other than minor corrections which are described in the exhibits, the only difference from the *October 15th Comments* is to reflect the additional period of May 1, 2000 through October 1, 2000 which is part of the relevant period in the instant discovery proceeding, but which was not addressed in the *October 15th Comments*.

The California Parties continue to believe that the Staff's border pricing proposal, including the cost-based alternative, with the refinements proposed by the California Parties, provides a lawful and practical alternative to the suspect California border price indices. The use of California border indices for refund calculations during this period was thoroughly discredited in the *October 15th Comments*. The developments and revelations since October 15, 2002, plainly demonstrate how broken and unreliable the border indices were, and further validate the conclusions reached in the August 13th Staff Report.

Since October 15, 2002, three additional energy firms -- El Paso, Williams, and CMS -- have admitted that their traders engaged in false reporting during the relevant period. Two natural gas traders, one for El Paso Corporation and one for Dynegy Marketing and Trade, have been criminally indicted for acts related to false reporting of natural gas trades. Dynegy itself reached a settlement in December 2002 with the Commodity Futures Trading Commission (CFTC) based on a finding that Dynegy "knowingly submitted false information to the reporting firms in an attempt to skew those indexes for Dynegy's financial benefit."[318] Investigations by the CFTC and the Department of Justice (DOJ) are continuing.

In November 2002, Michelle Markey -- who had been in charge of the gas and electric price teams that gathered information for *Gas Daily*, *Inside FERC*, and *Megawatt Daily* -- testified before the California Senate Select Committee to Investigate Price Manipulation of the

[318] Harris Testimony, Exh. CA-15 at 14.

Wholesale Energy Market (the "Dunn Committee") about the prevalence of misreporting in the industry.[319] With regard to the decision to report trades, she testified that "[y]ou stretched your price in favor of what the company's position was, or don't report it at all, because you would know whether or not your indices -- your volumes and price could in fact affect the index."[320] Not only does Ms. Markey admit that it was "common knowledge" that trades were "exaggerate[d]", but she also highlights a significant corollary to the active misreporting of data: namely, that it is possible to influence the index by selectively <u>not</u> reporting prices.[321]

Ms. Markey further testified to the impact that "wash trades" could have on price indices.[322] This is a concern that is more that just academic in light of the quantity evidence on wash trades by Enron and a variety of counter parties, including a number with Reliant during December 2000, a period when gas prices were achieving new highs.[323] This linkage is particularly relevant given Reliant's central role in arguing for the use of California border indices in the refund methodology proceeding, and its assertions in Docket No. PA02-2-000 that it did not engage in any such trades.

Evidence uncovered during discovery in this case further demonstrates that the California border index does not accurately reflect the gas prices faced by generators and other market participants. For example, at least one major market participant refused to continue a deal priced at the border index because it was having difficulty selling gas at the daily index price, an

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[319] *Id.* at 6-7.

[320] *Id*.

[321] *Id.*

[322] *Id.* at 12.

[323] *Id.* at 12-13.

occurrence that was described as "not unusual."[324] Evidence gathered during the past 100 days also supports the conclusion that generators had a broad portfolio of assets and sophisticated gas supply management techniques at their disposal to hedge, or otherwise manage (and often to benefit from), volatility in natural gas prices.[325]

In sum, based on the August 13th Staff Report, based on the *October 15th Comments*, and the testimony of Dr. Harris, which details additional revelations of misreporting and evidence adduced in this proceeding, the Commission should find that the California border price indices are not appropriate prices to use in calculating refunds or other remedies in this proceeding. A legal, reasonable, and workable alternative was proposed in the Staff Report, as further refined by the California Parties in the *October 15th Comments*. The California Parties urge the Commission adopt this alternative.

IV. THE LIMITED EFFECTIVENESS OF OVERSIGHT AND ENFORCEMENT EMBOLDENED SELLERS TO ENGAGE IN MANIPULATIVE AND ANTI-COMPETITIVE ACTIVITIES DURING THE RELEVANT PERIOD

Since April 1, 1998, when the restructured California market opened, there have been studies conducted of nearly every aspect of the market from a variety of perspectives.[326] Many of the reports and studies prepared by the ISO, the PX, and their respective MSCs reflect the concern these entities have had, and continue to have, with the potential for exercises of market power and market manipulation.[327] The Commission itself, in conditionally approving the

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[324] *Id.* at 16.

[325] *Id.* at 17-20.

[326] In the *November 1st Order* the Commission stated that it had placed all the reports prepared up to that time by the PX and the ISO and their market surveillance committees (MSC) in the record of this proceeding. *November 1st Order*, 93 FERC at 61,123 n.3.

[327] A number of these reports have also been included in exhibits provided herein. Among the included reports are: an August 1998 ISO MSC report on the operation of Ancillary Service markets (continued)

restructuring in 1997, expressed a concern even at that time with the potential for the exercise of market power and the need for effective oversight and mitigation.[328] California's electric markets have been the subject of studies by the General Accounting Office (GAO)[329] and testimony by a representative of the GAO to the Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs, Committee on Government Reform, House of Representatives.[330] The US Senate Committee on Governmental Affairs undertook an extensive investigation of the Commission's oversight of Enron Corp. and Enron's role in the California

(Exh. No. CA-285: *Preliminary Report on the Operation of the Ancillary Services Markets of the California Independent System Operator*, ISO MSC, August 19, 1998); ISO Department of Market Analysis Reports from 2001 (Exh. No. CA-288: *Market Analysis Reports*, Anjali Sheffrin, Director of DMA, January 16, 2001, February 16, 2001, March 23, 2001, May 18, 2001; *Amendment 33 Cost Reporting Summary*, not dated; *Proposed Market Monitoring and Mitigation Plan for California Electricity Market*, Wolak, February 6, 2001; *Further Analyses of the Exercise and Cost Impacts of Market Power in California's Wholesale Energy Market,* Eric Hildebrand, March 2001; *Empirical Evidence of Strategic Bidding in California ISO Real Time Market*, Anjali Sheffrin, March 21, 2001; *Comments on "Staff Recommendation on Prospective Market Monitoring and Mitigation for the California Wholesale Electricity Market*" prepared by MSC, March 22, 2001; *Report on Real Time Supply Costs Above Single Price Auction Threshold: February 2001*, prepared by DMA, April 14, 2001; *Market Monitoring Report*, prepared by DMA, June 20, 2001) and from 2002 (Exh. 289: *Analysis of Trading and Scheduling Strategies Described in Enron Memos*, October 4, 2002; data response related to the October 4, 2002 report dated January 16, 2003). Additional PX, ISO and MSC reports are included in Exh. Nos. CA-231 (*CAISO Report on California Energy Market Issues, June 2000*, August 10, 2000), CA-232 (*Analysis of June 2000 Price Spikes*, Wolak, December 6, 2000); Exh. No. CA-244 (*Evidence of Strategic Bidding in CAISO Real Time Markets*, Anjali Sheffrin, March 21, 2002); Exh. No. CA-273 (*Report on Real Time Supply Costs Above Single Auction Threshold: December 8, 2000 - January 31, 2001*, prepared by DMA, February 28, 2001); Exh. No. CA-291 (PX reports to FERC).

[328] *Pac. Gas and Elec. Co.,* 81 FERC ¶ 61,122, at 61,436 (1997) (noting that the Commission would "continue to monitor and oversee the further development and evolution of the ISO and PX to ensure that potential market power problems are identified and that appropriate mitigation measures are undertaken").

[329] Exh. Nos. CA-277, CA-278, and CA-280 .

[330] Exh. No. CA-279.

energy crisis.[331] There have also been numerous academic reports studying the California energy markets.[332]

Although these reports come from a variety of sources and from periods of time ranging from 1998 through 2003, the common thread is a concern with California's electric markets. These reports generally addressed how the market was expected to work, how it actually worked, or why it did not work as it was expected to. Several overarching themes emerge from these studies and reports. First, there was a clear understanding early in the California electric restructuring process that there was a potential for the exercise of market power that needed to be guarded against. Second, the complexity of the restructured market and rules created opportunities to manipulate or game the system that required constant "fine tuning" of the ISO markets through, for example, a series of market notices and tariff amendments to attempt to correct problems as they were identified. Third, and perhaps most critically, the market oversight and enforcement mechanisms then in place, both inside California and at the federal level, were often not sufficient to deter manipulative market strategies and exercises of market power.

The reports relating to the third point are particularly relevant for understanding why marketers and others would be willing to risk the consequences of getting caught exercising market power or engaging in collusive behavior in the California and Western energy markets. However, it does not take a GAO or an ISO or a Congressional report to understand why the following two individuals, recorded on May 22, 2000, would be willing to break the rules:

> PERSON 2: Hey, guys, you know when we might

[331] Exh. Nos. CA-274-75, 279.

[332] Exh. No. CA-292.

follow rules? If there's some sort of penalty.

PERSON 1: That's right.

PERSON 2: I would never suggest it, but it seems like the writing would be on the wall.

PERSON 1: Well, I mean, there's -- you know, our position is if it's a reliability issue, then reliability comes over the economics.

PERSON 2: Right.

PERSON 1: So we don't have a problem with that. But it needs to be a reliability issue. If it's economics, it's economics, and by God, that's what rules.

PERSON 2: You'll let the California rate payers pay.

PERSON 1: That's right. I don't have a problem with that. I have no guilty conscience about that.

PERSON 2: All right, man.[333]

At the time of this conversation, in spite of the many studies and Commission orders addressing market power issues, actual market-related enforcement action had been episodic, fractured, and largely ineffectual. The ineffectiveness of attempts to police exercises of market power or market manipulation is illustrated by the following investigations of incidents involving Enron and Powerex:

Enron: The Silver Peak Incident. The Silver Peak incident and related investigation are described in detail in documents contained in Exhibit No. CA-291 at 222-64. This incident,

[333] Exh. No. CA-239 at 6-7. Earlier in the transcript, Person 1 is identified as Kevin from Reliant and Person 2 as Walter. From the overall context of the call, both appear to be Reliant employees. If they are not, the sharing of some of the information in this call could be highly questionable for reasons discussed *supra* in the section on collusion.

which took place on May 25, 1999, destabilized the California market for a day and resulted in a shift of loads from the day-ahead to the hour-ahead and real-time markets. As described in the PX's report, Tim Belden, the Enron trader responsible for this incident, acknowledged that it was an "experiment" undertaken to see how the market would react.[334] After an investigations by the PX Compliance Unit, Enron and the PX reached an agreement on April 28, 2000, that provided for Enron to pay just $25,000, to defray the costs of the investigation,[335] leaving California's consumers and utilities to pay a bill estimated to be $4.6 to $7 million higher than their power costs otherwise would have been.[336]

Powerex: The Target Price Incident. During January through April, 2000, Powerex's bidding exhibited an anomalous pattern that was found to impact the target price and market clearing prices in the ISO's real-time energy market.[337] The ISO estimated the total market impact at about $1.46 million.[338] The ISO's proposed response to this gaming of its target price was not to punish Powerex, but to prospectively change the protocol used to set the target

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[334] *Id.* at 246.

[335] *Id.* at 260. This nominal settlement payment contrasts with a significant $2.1 million civil penalty paid by Avista Energy to the CFTC in August 2001, to settle allegations involving a scheme conducted from April through August 1998 to manipulate the settlement price of Palo Verde and COB electricity futures contracts to permit Avista Energy to realize or increase its gain on options contracts. Exh. No. CA-345.

[336] Exh. No. CA-291 at 245.

[337] Exh. No. CA-62 at 5.

[338] *Id.*

price.[339] Once again, consumers and utilities were left to pay for the gains received by Powerex and other sellers due to Powerex's manipulation of California's energy market.[340]

Thus, by May of 2000, knowing that there did not appear to be strong and effective oversight or a willingness to impose significant penalties in the California and Western energy markets, sellers, like the Reliant employee quoted above, were emboldened to try the many schemes that, at least until June 2001, effectively increased the profits of market participants by many billions of dollars above what they would have otherwise been, or above what would have existed in workably competitive markets with strong and effective oversight.

V. THE REMEDY REQUESTED BY THE CALIFORNIA PARTIES IS WARRANTED NOT ONLY BECAUSE OF THE EVIDENCE PRESENTED BUT ALSO BECAUSE SELLERS HAVE MISLED THE COMMISSION, DESTROYED DOCUMENTS, AND PREVENTED DISCOVERY

The evidence adduced in this submission is more than sufficient to show that pervasive market manipulation and tariff violations by sellers drove up prices both before and after October 2, 2000. Yet that evidence is just the tip of the iceberg. Had certain sellers not misled the Commission, had they not -- in the meantime -- destroyed relevant documentation, had they been more forthcoming in meeting their discovery obligations, and had the California Parties not been restricted in their discovery by the Commission in this proceeding, surely far more evidence of pervasive market manipulation would have emerged.

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[339] *Id.* at 1.

[340] In another incident relating to Powerex, Powerex admitted it submitted $600/MWh adjustment bids (compared to the $37 it had been bidding) to "punish" another market participant. The PX investigator explained to Powerex this could be construed as price signaling, a possible antitrust violation. In spite of Powerex's admission, and the potential seriousness of Powerex's action, the recommendation of the PX investigator was to simply close the case and to so inform Powerex. Exh. No. CA-291 at 265-289.

The evidence of sellers' conduct in this proceeding is more than sufficient to warrant the full remedy requested by the California Parties. Yet the Commission should condemn sellers' conduct based on both what they have produced and what they have failed to produce. Given the record of obstruction, if the Commission has any doubt about the adequacy of this record to accord full relief, it should institute additional procedures so that further evidence of the sellers' misdeeds may be presented.

A. The Commission Should Draw Negative Inferences from the Sellers' Deceptive and Misleading Conduct

These proceedings have lasted over two years because the sellers have concealed the true nature of their conduct from the Commission and the California Parties. As each layer of the onion has been peeled back, the stench of the sellers' misconduct has become more rank. The chasm between what the sellers have told regulators they did and what they actually did gives the Commission full authority to disregard their self-serving submissions here, which, like their previous obfuscations, have simply prolonged these proceedings and kept the Commission from imposing the full remedy required by the evidence and the law.

We start with the most explicit admissions of wrongdoing available to the Commission: guilty pleas admitting that representatives of sellers lied to and misled the ISO, the Commission and other regulators.

Guilty Pleas. In his guilty plea agreement, former Enron employee Jeffrey Richter admitted that:

> In 2000, I and other individuals at Enron agreed to devise and implement fraudulent schemes through these [PX and ISO] markets. We designed the schemes to obtain increased revenue for Enron from wholesale electricity customers and other market participants in the State of California. The schemes required us to submit false information to the ISO in the electricity and ancillary services [ISO and PX] markets. . . . Among other things, we knowingly and intentionally filed energy schedules and bids that

> misrepresented the amount and geographic location of the load we intended to serve. We did so for the purpose of increasing the appearance of congestion on transmission lines, increasing the market price for congestion fees for transmission between zones, earning congestion payments that otherwise would not have been available, and increasing the value of our FTRs (which only generated revenue when congestion existed).
>
> We also submitted bids to supply ancillary services that we did not have, or did not intend to supply, in the ISO's day-ahead ancillary services market. The bids we submitted contained fabricated information regarding the source and nature of the ancillary services we proposed to supply to the ISO. Once the bids were accepted we would cancel our obligation to supply the ancillary services by purchasing them in the ISO's hour-ahead ancillary services market. Enron would then profit by capturing the difference in price between the two markets.
>
> As a result of these false schedules and bids, we were able to manipulate prices in certain markets, arbitrage price differences between the markets, and obtain congestion fees in excess of what we would have received with accurate schedules and bids.[341]

Former Enron employee, Timothy Belden, entered a similar plea, which includes additional admissions that he and others at Enron "were paid to 'relieve' congestion when, in fact, we did not relieve it. We exported and then imported amounts of electricity generated within California in order to receive higher, out-of-state prices from the ISO when it purchased 'out-of-market.' We scheduled energy that we did not have, or did not intend to supply."[342] Belden further admitted that as a result of Enron's market manipulation, Enron received "prices for electricity above the price caps set by the ISO and the Federal Energy Regulatory Commission."[343]

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[341] Exh. No. CA-206 at 3-4.

[342] Exh. No. CA-229 at 3 3:13-22.

[343] *Id.* at 3.

As noted above, traders from El Paso and from Dynegy have been indicted on federal wire fraud and false reporting charges for knowingly providing false reports of natural gas prices to publishers of natural gas price indices.[344] And five energy firms, Dynegy, AEP, El Paso, Williams, and CMS, have admitted that their traders falsely reported gas prices.[345] Dynegy has entered into a settlement with the CFTC regarding such false reporting. The CFTC's Settlement Order found that Dynegy "knowingly submitted false information to the reporting firms in an attempt to skew those indices for Dynegy's financial benefit" and misrepresented that West Coast Power (the owner of Dynegy's California power plants) was a counterparty in fictitious gas trades.[346] Given the evasiveness of witnesses and the DOJ's continued proprietary treatment of much relevant information (not made available to the California Parties),[347] further indictments and plea agreements by representatives of a number of sellers seems inevitable. The Commission should contrast these stark admissions and criminal allegations with the sellers' obfuscations before this tribunal, designed to mislead and evade the truth. Take, for example:

Enron. In its November 2000 Comments to the Commission, Enron "applaud[ed] the Commission's overarching conclusions . . . that the high prices experienced this summer in the California wholesale markets resulted from a combination of an imbalance in supply and demand and a severely flawed market structure, rather than from improper behavior by sellers of

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344 Exh. No. CA-205 at 2-3 (alleging that Michelle M. Valencia knowingly caused to be delivered for transmission false and misleading and knowingly inaccurate reports concerning market information that affected and tended to affect the price of natural gas); Exh. No. CA-207 at (alleging the same).

345 Harris Testimony, Exh. No. CA-15 at 9-10.

346 *Id*. at 13.

347 Phillips Decl.. at ¶11.

electricity, as has been alleged by some."[348] Now the Commission knows that Enron's deafening applause was designed to drown out the truth, which is catalogued in the guilty pleas of its chief traders.

Not only did Enron consistently suggest to this Commission that it had not manipulated the market or exercised market power,[349] it also misled the Commission regarding its massive profits. For example, in response to the Commission's questions, Enron told the Commission in December 2000 that its third quarter 2000 earnings were less than alleged, and attached a statement indicating that earnings from "its California business" were $292 million.[350] This was a misleading statement, as Enron knew, because, as disclosed in Section 6 of its November 14, 2000 10-Q, Enron's income from "wholesale electric and gas trading operations" -- which was the subject of the Commission's inquiry -- showed earnings of $627 million.[351] Enron was able to report lower overall corporate earnings only because other business segments, such as broadband, had incurred substantial losses.

The California Parties' submission demonstrates unequivocally that Enron's entire commercial purpose was to manipulate and game the California wholesale electricity markets, partnering with a number of other participants in this proceeding to manipulate the market, and to cause enormous price escalation and windfall profits to sellers. Enron is not the end of the

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[348] Exh. No. CA-224 at 2.

[349] Exh. No. CA-347 (July 9, 2001 Statement of Power Marketers Group, which included Enron and others, boldly asserting that "none of them engaged in any activity that inflated prices in California.").

[350] Exh. No. CA-145 at 122-137 (Response of Enron Power Marketing, Inc. and Enron Energy Services, Inc. to Chairman Hoecker's Questions, Docket Nos. EL00-95-000, EL00-98-000, 3-4 and Attachment 1 (Dec. 4, 2000)).

[351] *Compare id.* at 124, 132 with Exh. No. CA-208 at 3, 11.

story, however. Other sellers made more money than Enron at this game and continue to mislead the Commission and the California Parties.

Reliant. On January 31, 2003, the Commission issued an order approving a settlement with Reliant based on the Commission's conclusion that Reliant managers had deliberately withheld generating capacity to increase prices in the California market.[352] Transcripts of Reliant telephone calls capture Reliant's traders and plant managers congratulating each other for their success in manipulating the market:

- We shut down all of our plants yesterday for today and tomorrow . . . we made all the money back and [Reliant's Manager 2] just thought that was the coolest strategy ever;[353]
- [E]verybody thought it was really exciting that we were gonna play some market power;[354] and
- That was fu-un![355]

These Reliant tapes are not atypical of Reliant's conduct, as discussed in the testimony of Dr. Fox-Penner's testimony.[356] At the same time that Reliant was manipulating the market, it was trying to keep a straight face telling the ISO, this Commission, and Congress that "market fundamentals" and "buyer behavior" caused the high prices.

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[352] *Fact Finding Investigation*, 102 FERC ¶ 61,108 at P 5 (explaining that "Reliant's Vice President of Power Trading . . . directed Reliant's west desk traders to respond to [the expected] loss. Accordingly, on Monday, June 20, Reliant reduced the capacity it bid into the CalPX for delivery on June 21 . . . to see if PX prices would increase and thus also rise forward prices").

[353] *Fact Finding Investigation,* 102 FERC ¶ 61,108 (Reliant Transcript from June 21, 2000, 14:34 at 1).

[354] *Id*. at 42.

[355] *Id*. at 43.

[356] Fox-Penner Testimony, Exh. No. CA-1.

On June 28, 2000, just days after Reliant's successful manipulation of the market by shutting down most of its plants and inflating day-ahead, real-time and forward pricing, Reliant Vice President John Stout, speaking on behalf of a number of generators, told the ISO Board that the recent price spikes were not because "generators are attempting to recover . . . a greedy profit[,] but [because they are attempting to recover] their average cost of generation per megawatt hour."[357] Significantly, this presentation was made in connection with ISO consideration of price caps to mitigate markets that were not workably competitive and needed measures to mitigate market power exercise such as Reliant's manipulative withholding, which had just occurred.

Because the Stout presentation conveyed inaccurate information to the ISO market monitors and ISO Board, it violated the MMIP including Section 4.5.2 of the ISO's MMIPs, which provides that failure to cooperate in the Market Surveillance Unit's investigation activities is ground for action against an ISO participant. The presentation also impeded the Market Monitoring unit's ability to enforce and implement MMIP Section 2.1.1 regarding anomalous market behavior, including Section 2.1.1.1. regarding withholding of generation.

On September 11, 2000, Mr. Stout testified before Congress that Reliant had not withheld generating capacity in the California market to "drive up prices."[358] Now the Commission order approving the Stipulation and Consent Agreement states that Reliant did just that.[359] Mr. Stout

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[357] Exh. No. CA-203 at 4.

[358] Exh. No. CA-269 at 16. *See also, Elec. Util. Indus. Restructuring & the Cal. Market: Hearing Before the Subcomm. On Energy & Power of the Comm. on Commerce*, 154, 106th Cong. (Sept. 11, 2000) (Mr. Barton (R) TX, Chair, House Subcomm. on Energy and Air Quality: "But have you ever participated in a dialog or a conference within your company where the decision was made to withhold power from the market intentionally to get a higher price the next hour?" Mr. Stout: "Absolutely not").

[359] *Fact-Finding Investigation,* 102 FERC ¶ 61,108 at P 13.

has since testified that he is uncertain about the accuracy of his testimony to Congress given Reliant's Stipulation and Consent Agreement.[360]

On November 22, 2000, Reliant filed Comments in Docket Nos. EL00-95-000, *et al.*, repeating its false mantra that market fundamentals and buyer behavior were to blame for high prices and assuring the Commission that Reliant and other out-of-state generators were not to blame.[361] Reliant wrote:

> Officials in California have responded to higher electricity rates by making demands on this Commission and by pointing fingers at convenient political targets -- principally, a group of "out-of-state" generators, including Reliant Energy. [But] the undeniable fact [is] that California suffers from a serious supply and demand imbalance created, in large measure, by a decade of decisions made at the state level.[362]
>
> MARKET FUNDAMENTALS EXPLAIN HIGHER PRICES AND MARKET VOLATILITY.[363]
>
> [I]n many instances, the buyers' own bid strategies have led to higher prices in high demand periods.[364]
>
> [Staff's] conclusion -- that such prices were "unjust and unreasonable" -- has no foundation. Notably the Commission Staff, following its investigation, was unable to point to any instances in which individual market participants or groups of market participants may have exercised market power at any time in the relevant period. Under such circumstances, . . . it is inappropriate for the Commission simply to label high prices as "unjust and unreasonable."[365]

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[360] Exh. No. CA-284 at 73-75.

[361] *See* Exh. No. CA-225 at 12-15. By contrast, Reliant employee Kevin Frankeny testified that none of the reasons that Reliant argued to the Commission were the cause for price escalation had anything to do with the "relative strength" in prices on June 21, 2000, precipitated by Reliant's exercise of market power. Exh. No. CA-218 at 10-12.

[362] Exh. No. 225 at 6-7.

[363] *Id*. at 10 (emphasis in original).

[364] *Id*.

[365] *Id*. at 11-12.

> [T]he bidding strategies of buyers, not sellers, drove the market to unprecedented high prices. . . . Each hour of the day, the buyers bid progressively higher and higher prices for power. . . . [H]igher prices were often driven by the prices bid by the market buyers, not the higher prices bid by suppliers, which is a pricing pattern consistent with competition between buyers, not a lack of competition between suppliers. . . .[366]
>
> One of the primary considerations in the determination of whether market-based rates are just and reasonable is whether a party has exercised market power, which has been held to be a "material fact."[367]

At congressional hearings held on April 10-12, 2001, Mr. Stout raised his right hand before the Subcommittee on Energy and Policy, Natural Resources and Regulatory Affairs and the Committee on Government Reform of the United States House of Representatives and swore to tell the truth, the whole truth, and nothing but the truth.[368] He then testified -- in disturbing contrast to what the later-disclosed Reliant telephone transcripts revealed -- as follows:

> [Congressman] Hunter: Do you think there was any reduction among the gas-fired users that was a function of a strategy that said if we got high prices when supply is constrained, let us keep the supplies constrained. Do you think there is any of that?
>
> Mr. Stout: I cannot speak for every producer, but certainly that was not the case for Reliant.[369]

Despite being under oath, Mr. Stout further asserted that it was a "cold, hard fact" that market manipulation did not cause high prices. Rather, high prices were due to "competition because you had a shortage of supply, was existing between buyers, not as much between

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[366] *Id*. at 14-15.

[367] *Id*. at 22 (citing *Cajun Elec. Power Coop. Inc. v. FERC*, 28 F.3d 173, 180 (D.C. Cir. 1994)).

[368] *See* Exh. No. CA-262 (Stout Testimony at Joint Hearings Before the Subcomm. On Energy Policy, Natural Resources and Regulatory Affairs & the Comm. on Gov't Reform, 107th Cong. 502 (April 10-12, 2001).

[369] *Id*. at 20.

suppliers. Buyers were working against one another to try and get scarce resources."[370] Somehow, Mr. Stout left out the cold, hard fact that such scarcity was due to Reliant's deliberate withholding of resources from the market in its successful effort to drive up prices.[371]

In its responses to the FERC Staff's Data Requests in PA02-2, Reliant denied that its natural gas buy/sellback transactions constituted wash trades.[372] Following this denial Reliant rationalized at length about why these transactions were either small in number or legitimate.[373] Yet logs produced by Enron in this proceeding reveal large volumes of natural gas wash trades with Reliant during a period of particularly acute natural gas price volatility.[374]

And even as it negotiated a settlement with the Commission to attempt to avoid the broader repercussions of its misconduct, Reliant either refused to respond to or served rote objections and denials of any misconduct in response to the California Parties' Data Requests.[375]

Williams. In its November 2000 Answers to Chairman Hoecker's Post-Hearing Questions about, among other things, Williams' profits from California operations, Williams informed the Commission that it "does not segregate earnings by region or unit, and Williams

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[370] *Id.* at 11.

[371] *See*, *e.g*., Exh. No. CA-242 at 31-33 (Paul Joskow & Edward Kahn, *A Quantitative Analysis of Pricing Behavior in California's Wholesale Elec. Market During Summer 2000*, filed as Exhibit A to *Comments & Request for Reh'g of So. Cal. Edison*, filed in Docket Nos. EL00-95-000, *et al*. (Nov. 22, 2000)).

[372] Exh. No. CA-275 at 6-7.

[373] *Id*

[374] *See* Exh. No. CA-15 at 11-12; Exh. No. CA-260.

[375] Exh. No. CA-220 at 2; Exh. No. CA-221 at 1-2; Exh. No. CA-222 at 2. Who knows how long Reliant kept its knowledge of its own market manipulation secret and to itself. Reliant employee Kevin Frankeny testified that he believed that he was first shown those highly incriminating transcripts of his own conversations over one year ago. *See* Exh. No. CA-218 at 5-6.

. . . possesses no reports or statements that segregate profits in such a manner."[376] Yet, on April 11, 2001, Williams had no difficulty reporting to itself the break-out for its California business in an e-mail.[377]

Coral. In a July 9, 2001 Statement of Coral Power, L.L.C., filed in these proceedings, Coral assured the Commission that "Coral has not manipulated market prices," but rather that it has "been part of the solution in the California energy crisis."[378] Yet discovery has disclosed that Coral recommended a strategy of bidding "phantom ancillary services" and in fact did so for many of its customers.[379] So much for being "part of the solution."

Powerex. In its responses to the FERC Staff's Data Requests in PA02-2, Powerex denied that it engaged in Fat Boy and Megawatt Laundering transactions.[380] Yet, the data presented herein[381] demonstrate that Powerex repeatedly conducted Fat-Boy and Megawatt Laundering transactions -- indeed, that it profited more than anyone else from such transactions. Powerex employees were instructed to tell the ISO in December 2000 that Powerex would sell electricity into the PX market to relieve the market volatility, but the data show that Powerex was purchasing power in the PX market during that time and re-selling into the ISO in real-time, usually through a third party to avoid detection.[382]

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[376] Exh. No. CA-219 at 3.

[377] Exh. No. CA-30 at 2.

[378] Exh. No. CA-347.

[379] Exh. No. CA-41 at 159-60.

[380] *See* Exh. No. CA-41 at 11-15 (Responses of Powerex to FERC Staff Data Request on Trading Strategies dated May 8, 2002).

[381] Fox-Penner Testimony, Exh. No. CA-1 at 117-18.

[382] *Id.*

Mirant. In its responses to the FERC Staff's Data Requests in PA02-2, Mirant denied that it engaged in Enron-like games and rationalized at length about what it called legitimate transactions. Yet discovery has revealed that Mirant was involved in scheduling Death Star Games -- or as one of Mirant's traders described these trades: "[I]ts just kind of loop-t-looping but it's making money. . . ."[383]

Sempra. In its responses to the FERC Staff's Data Requests in PA02-2, Sempra denied that it engaged in Enron-like gaming strategies.[384] Yet the data presented herein demonstrate that Sempra repeatedly engaged in such strategies, including Ricochet and Death Star.[385]

Modesto Irrigation District. In its responses to the FERC Staff's Data Requests in PA02-2, MID denied that it engaged in Enron-like Death Star or Megawatt Laundering transactions.[386] Yet, the data presented herein demonstrate that MID repeatedly gamed congestion through a Death Star-like circular export-import schedule.[387]

Other Sellers. Most of the sellers in this proceeding have similarly denied that they played any Enron-type games, hoping to construct an artificial wall between themselves and Enron. Yet as the evidence set forth in this submission demonstrates, many of those responses are carefully crafted qualified denials that are designed to evade the truth. The ISO's Market investigations staff have found the same discrepancy between sellers' responses to the

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[383] Fox-Penner Testimony, Exh. No. CA-1 at 34; Exh. No. CA-1 at 138; Exh. No. CA-204 at 21.

[384] *See* Exh. No. CA-217 at 3-8.

[385] Fox-Penner Testimony, Exh. No. CA-1 at 110:12-28; Fox-Penner Appendices, Exh. No. CA-2 at 65; Fox-Penner Testimony, Exh. No. CA-1 at 131:27-31; Fox-Penner Appendices, Exh. No. CA-2 at 145.

[386] *See* Exh. No. CA-216 at 3, 5.

[387] Fox-Penner Testimony, Exh. No. CA-1 at 8:21-25, 132:22-29; Fox-Penner Appendices, Exh. No. CA-2 at 143.

Commission Staff's data requests and the sellers' actual conduct. For example, in investigating a transmission outage on El Dorado Branch Group that occurred on May 27, 28, 2000, the ISO Market Investigations staff concluded:

> In response to previous data requests by FERC staff, these participants have indicated that they had not employed the "Wheel Out" strategy described in the Enron memos . . . [h]owever, Market Investigations staff feels that the additional data [set forth in its report] provides strong evidence that after becoming aware of the outage on the Four Corners/El Dorado line prior to the Hour Ahead market for Hour ending 19 on May 27, 2000, [Dynegy, Powerex, Sempra, Enron, Coral and Duke] may have modified their adjustment bids in the export direction on the Four Corners/El Dorado for the purpose of collecting counterflow revenues on the schedules that had strong reason to believe would be cut in real time by the ISO due to this transmission outage.[388]

Natural Gas Pricing. As mentioned above, El Paso, Williams, and CMS all have admitted that their traders engaged in false reporting and indictments of Dynegy and El Paso employees have been filed. In November 2002, Michelle Markey, who was in charge of gas and electric price teams that gathered information for *Gas Daily, Inside FERC*, and *Megawatt Daily*, testified that misreporting of gas pricing was widespread in the industry.[389] Those admissions, indictments and testimony fully confirm the wisdom of this Commission's conclusion that reported prices are too untrustworthy to construct a valid remedy in these proceedings. She also testified about the impact that "wash trades" could have on price indices, a concern that is more than just academic in light of the high volume of wash trades by Enron and a variety of counter parties, including many with Reliant, during December 2000.[390] The irony that it was Reliant

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[388] Exh. No. CA-272 (ISO Market Investigations Staff Report: Transmission Outage on El Dorado Branch Group May 27-28, 2000).

[389] Exh. No. CA-15 at 6-7 (Harris Testimony).

[390] *Id*. at 10-11.

that entered into such wash trades with Enron should not be lost on the Commission, as Reliant played a central role in arguing for the use of California border price indices in the refund methodology proceeding.[391]

Reliant's role in confusing the Commission about natural gas pricing did not stop there. On July 9, 2001, Reliant's John Stout criticized the ISO's refund formula as unfairly depressing natural gas costs below actual levels. He testified that the "use of bid week monthly" prices underestimated by sixteen percent the daily spot prices at which he claimed natural gas prices should be set for any refund calculation.[392] Mr. Stout, a Reliant officer, testified, without being subject to cross-examination, and the Commission accepted,[393] that natural gas pricing should be based on daily spot market pricing, and not on longer term pricing. Yet, Reliant congratulated itself in March 2001 that it had "covered portfolio gas basis position prior to run up"[394] of natural gas prices, demonstrating clearly (along with other evidence detailed in the Harris Testimony submitted herewith) that Reliant did not pay for natural gas based on spot pricing, but hedged its position to avoid the volatility of the spot market. And Mr. Stout testified that he had no idea when he testified before Judge Wagner whether Reliant had largely avoided the very high prices in the natural gas spot market in December 2000 by purchasing gas in the forward market.[395]

Sellers' "Cost" Justifications. The sellers convinced the ISO and FERC to impose a soft cap in December 2000 after complaining that the ISO's cap was not permitting sellers to

[391] Harris Testimony, Exh. No. CA-15 at 11:17-20.

[392] Exh. No. CA-230 at 7.

[393] *Id. San Diego Gas & Elec. Co., et al.,* 96 FERC ¶61,120 (2001); *San Diego Gas & Elec. Co., et al.,* 97 FERC ¶ 61,275 (2001).

[394] Exh. No. CA-57 at 6 (CAL-REL0014591).

[395] Exh. No. CA-284 at 101 (Deposition of John Stout (Feb. 27, 2003)).

recover their true costs. The sellers' response to the soft cap is suggestive of their manipulative behavior generally. Review of sellers' documents shows that "cost" justifications after December 2000 contained multiple levels of risk premiums, adders and inflators for sales to the ISO. For example:

- Reliant's cost justifications included, in addition to actual production input costs, adders for a fuel risk factor, EFOR risk factor, and a credit risk factor totaling more than $85/MWh and an additional "Target Margin" of over $52/MWh;[396] and

- Duke, after adding a number of risk premia, multiplied its "cost" five times to arrive at the "cost" it would charge the ISO.[397]

Not only does this record give the Commission ample reason to doubt the credibility of the sellers in this proceeding, but it also authorizes the Commission to draw adverse inferences regarding the sellers' submissions. Where a party has taken inconsistent positions before the trier of fact, has misled the trier of fact and the other parties through its conduct, and has obstructed the pathway to the truth -- as have sellers here -- the trier of fact may draw negative inferences and even impose liability as a sanction.[398] Based on this record, the California Parties encourage the Commission to do so here, if for no other reason than to restore dignity to the proceedings before it.

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[396] Exh. No. CA-209 at 1.

[397] Exh. No. CA-214.

[398] *See, e.g., Chambers v. NASCO, Inc.*, 501 U.S. 32, 44-45 (1991) (a primary aspect of a court's discretion "is the ability to fashion an appropriate sanction for conduct which abuses the judicial process."); *Cobell v. Norton*, 226 F. Supp. 2d 1, 27 (D.D.C. 2002) (courts have considerable discretion in sanctioning misconduct, including entry of a default judgment or outright dismissal).

B. The Commission Should Draw Negative Inferences from the Sellers' Destruction of Evidence

While the Commission was being misled by sellers, the sellers were busy destroying evidence of any wrongdoing. The Commission's Rules of Practice and Procedure and the FPA required sellers to retain all relevant records, beginning August 2, 2000, the date the Complaint in this proceeding was filed. The Commission's Rules of Practice and Procedure require:

> Pending complaint litigation or governmental proceedings. Notwithstanding the minimum requirements, if a public utility or licensee is involved in pending litigation, complaint procedures, proceedings remanded by the court, or governmental proceedings, it must retain all relevant records.[399]

The FPA further provides that it is "unlawful for any person willfully to hinder, delay, or obstruct the making, filing, or keeping of any information, document, report, memorandum, record, or account required to be made, filed, or kept under [the FPA] or any rule, regulation, or order thereunder."[400] Notwithstanding these clear directives, many key sellers either willfully destroyed or failed to retain documents after the Complaint in this proceeding was filed.

1. Wanton document destruction

In the course of the discovery process, the California Parties have uncovered evidence that sellers flagrantly destroyed documents relevant to this proceeding.

Enron. The shredding of documents by Enron, in response to the initiation of a government investigation into its practices, has now become the most prominent image of corporate misconduct in America. E-mails that escaped destruction, and have been produced, demonstrate that Enron employees altered the protocol for destruction of tape-recorded

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[399] 18 C.F.R. § 125.2 (l) (2002).

[400] 16 U.S.C. § 825c (b) (2001).

conversations[401] and attempted to cover-up destruction of documents through retroactively issued orders by counsel.[402] The United States government seized all of Enron's recorded conversation and other material that Enron had not managed to destroy. As such, those materials were not available to the California Parties in this proceeding.[403]

Mirant. An ex-Mirant employee disclosed that he was instructed to delete certain files relating to the California markets from hard drives and that key Mirant executives were instructed to turn in their laptops so that Mirant could clean their hard drives. The allegations suggest that information regarding the California market was destroyed.[404] When the California Parties attempted to locate that employee, they found his attorney, but were refused even his name as his counsel was negotiating immunity with the prosecutor for his client.[405]

The City of Glendale. A Glendale employee, Jack Dolan, told an ex-Glendale employee, Carl Edginton, that Mr. Edginton could destroy one of the documents that contained information about Enron's gaming strategies.[406] While Mr. Dolan testified that he does not recall

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[401] *See* Exh. No. CA-145 at 1168-69 (Sept. 27, 2000, e-mail announcing new retention policy on trader tapes, reducing retention period from four to one month and destruction of current tapes older than one month) (August 15, 2000, e-mail observing that policy change ultimately adopted will result in not recording a material number of transactions).

[402] *See id.* at 1170-71 (Jan. 22, 2002, e-mail from in-house attorney requesting reassignment of duties because company-wide e-mail stating that documents should not be destroyed "as earlier instructed" is misleading, attorney believes no such earlier instruction was issued).

[403] Phillips Decl. ¶ 11.

[404] *See* Exh. No. CA-178 at 68-72 (Consolidated Amended Class Action Complaint, ¶¶ 112-120, Civil Action No. 1:02-CV-1467-BBM, In Re Mirant Corporation Securities Litigation, Nov. 25, 2002).

[405] Phillips Decl. ¶ 12.

[406] *See* Exh. No. CA-213 at 10-14.

telling Mr. Edginton to destroy incriminating documents, he did not deny that he had, in fact, told Mr. Edginton to destroy incriminating documents.[407]

2. Negligent document destruction

Many sellers who were not actively destroying documents failed to retain them in accordance with the requirements of the Commission's Rules and the FPA.

Powerex. Powerex did not preserve relevant paper and electronic documents until after receiving a letter from the California Attorney General in late-December 2000. Even then, Powerex only preserved e-mail by its traders; it did not begin preserving e-mail from other employees until August 2002, two years after this proceeding was initiated. Powerex did not start preserving other electronic documents until mid-January 2001. To date, Powerex still has no formal document retention policy and has not taken any steps to preserve paper documents relevant to this proceeding.[408]

Portland General Electric. Portland General Electric Company (PGE) also failed to adequately preserve documents. In response to the California Parties' first set of Data Requests, PGE stated that "[e]-mail communications that were sent or received during the relevant time period were eliminated from [PGE's] system long before this proceeding was initiated and would need to be restored before such communications could be searched for responsive documents."[409] In response to the California Parties' Second Set of Data Requests, PGE acknowledged that, not

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[407] Exh. No. CA-213 at 11.

[408] *See* Exh. No. CA-233 at 2-3.

[409] CA-338 at 2-3.

only were e-mails deleted after this proceeding was commenced, but that it also would not be able to restore many of those e-mails.[410]

Reliant. Reliant did not instruct its employees to retain documents until it received a letter from the California Attorney General in December 2000, four months after the Complaint in this case had been filed and Reliant had intervened and actively participated in this proceeding. Because of its failure to act, Reliant employee e-mail from August through November 2000 was destroyed.[411]

Bonneville Power Administration. Notwithstanding the Commission's order dated May 7, 2002 in Docket No. PA02-2-000 directing the participants in that proceeding to preserve all relevant documents, BPA has not changed its practices regarding its retention of e-mail and electronic documents. BPA retains back-up tapes for e-mail for only <u>one week</u>.[412]

The City of Glendale. Glendale has no document retention policy and did not begin retaining documents until after the Dunn Committee commenced its investigation in the spring of 2001.[413]

Northern California Power Agency. The Northern California Power Agency (NCPA) not only lacked a comprehensive document retention policy, it encouraged its employees to

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[410] *Id.* at 7-11.

[411] *See* Exh. No. CA-192 at 38-40 (CAL-REL-52.1 & 52.2).

[412] *See* Exh. No. CA-109 at 14-15 (BPA's response to CAL-BPA 46.1).

[413] *See* Exh. No. CA-213 at 3-6, 14-15 (Excerpt of Dolan Deposition Tr. at 75:21-78:05 -- documents not retained until after Dunn Committee investigation, 118:23-119:20 -- no document retention policy).

delete e-mail. Donald Imamura, a short-term planning engineer for NCPA, testified that NCPA's information systems staff issued a directive to delete e-mails.[414]

Other Sellers. Many of the other sellers in this proceeding took no steps to preserve relevant documents covering the period spanning January 2000 and June 2001. In many cases, they did not even adopt a written document retention policy. Their practices of routinely destroying their electronic back-up tapes and tape-recorded conversations continued, notwithstanding the initiation of this proceeding and investigations by the California Attorney General.[415]

3. The failure to produce information warrants the Commission's negative inference that such information is adverse

The Commission long has held that, where only one party has access to information, and that party does not produce that information, the information is presumed to be unfavorable to that party.[416] Similarly, the federal courts have consistently held that the spoliation of evidence

[414] Exh. No. CA-212 at 3-4 (Excerpt of Imamura Deposition Tr. at 41:7-42:12).

[415] *See* Exh. No. CA-192 (CAL-AES-52 (no document retention policy); CAL-AEP-46 (no formal document retention policy, trader tapes retained for one year, Outlook e-mails destroyed after one month, Lotus Notes e-mails destroyed after one year); CAL-AEI-46 (prior to May 2002, no written document retention policy, took steps to preserve relevant documents and other information in response to FERC Staff directive in PA02-2, May 2002); CAL-AVA-46 (prior to May 2002, no written document retention policy, took steps to preserve relevant documents and other information in response to FERC Staff directive in PA02-2, May 2002); CAL-SEA-46 (e-mail back-up tapes rotated every three days so no e-mail from relevant time period, computer network backed up nightly but tapes overwritten every few months, and reporting no change in back-up procedures during relevant time period); CAL-IMP 46.1 (no document retention policy); CAL-NCA-46 (no document or e-mail retention policy, stopped recycling e-mail back-up tapes in Spring 2002 on instruction from Dunn Committee); CAL-PGE-46.1 (recycling of back-up tapes not stopped until December 19, 2000); CAL-SMD-46.1 (until June 2000, retained e-mail back-up tapes for three months, presently retains only for 30 days); CAL-TEMI-46.1 (no e-mail back-up made prior to January 1, 2001 and, thus, no e-mail available for 2000); CAL-EXE-97 (until May 2002, Exelon overwrote all tape recorded trader telephone calls)).

[416] *See*, *e.g.*, *CNG Transmission Corp.*, 50 FERC ¶ 61,006 at 61,011 (1990); *Town of Highlands, N.C. v. Nantahala Power & Light Co.*, 37 FERC ¶ 61,149 at 61,357 (1986), *reh'g denied*, 38 FERC ¶ 61,052 (1987).

germane to a material issue permits the trier of fact to infer that the evidence would have been unfavorable to the party responsible for its destruction.[417] That inference is permitted whether the destruction is wanton or negligent.[418] And the inference is most certainly warranted where parties, as here, fail to retain documents in accordance with the clear directive of 18 C.F.R. § 125.2(l).[419] Sellers' destruction of, and failure to retain, relevant documents after the California Parties filed the Complaint in August 2000 warrants the Commission to draw a negative inference about what sellers failed to produce in these proceedings.

C. The Commission Should Draw Negative Inferences from the Sellers' Prevention of Discovery

In addition to destroying evidence, sellers simply refused outright to produce discovery expressly requested by the California Parties. In accordance with the law, sellers' efforts to prevent the California Parties from obtaining discovery entitle this Commission to draw a negative inference against sellers.

In two instances, witnesses shielded discovery by invoking the Fifth Amendment. The California Parties took the deposition of former Enron employees Timothy Belden and John Forney, both of whom invoked the Fifth Amendment privilege to virtually every question posed.[420] Others were not pursued further after their lawyers told the California Parties that the

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[417] *See, e.g.*, *Kronisch v. United States*, 150 F.3d 112, 126 (2d Cir. 1998) (noting that drawing adverse inferences from document destruction is a "well established and long-standing principle of law").

[418] *See Residential Funding Corp. v. DeGeorge Financial Corp.,* 306 F.3d 99, 112 (2d Cir. 2002) (holding that where retention is required by law, bad faith need not be shown to draw an adverse inference).

[419] *See, e.g., Zimmermann v. Associates First Capital Corp.*, 251 F.3d 376, 383-84 (2d Cir. 2001), citing *Byrnie v. Town of Cromwell, Bd. of Educ.*, 243 F.3d 93, 109 (2d Cir. 2001).

[420] *See* Exh. No. CA-182 (Timothy Belden Deposition Tr. at 17:03 – 43:14 (Jan. 31, 2003); Exh. No. 145; Exh. No. CA-145 (John Forney Deposition Tr. at 14:18 – 57:22 (Jan. 22, 2003)).

witness would do no more than invoke the Fifth Amendment.[421] Although the Constitution grants individuals the right to avoid self-incrimination, in a civil proceeding, such as this, the Commission is permitted to draw negative inferences from a witness's invocation of the Fifth Amendment.[422] Such inferences are permissible even when the witness is a former employee of the party against whom the inference will run.[423] As the Supreme Court advised regarding such invocations: "[s]ilence is often evidence of the most persuasive character."[424]

In another instance, the California Parties sought the deposition of Reliant Vice President John Stout, who has been a chief architect of the argument that factors other than market manipulation caused highly volatile prices in the California energy market during the relevant period and regarding natural gas pricing. Mr. Stout cancelled his deposition and appeared on February 27, 2003, only after being ordered by the Discovery Master to do so.[425] At his deposition, Mr. Stout testified that he doubts the accuracy of his prior testimony and submissions

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[421] Given the limited amount of time to complete discovery in this proceeding, the California Parties decided not to depose Michael Driscoll, a former Enron employee, after Mr. Driscoll's attorney informed the California Parties that Mr. Driscoll would assert his Fifth Amendment rights and thus, "his deposition would be a costly and wasteful exercise." Exh. No. CA-35 (Letter from Christopher B. Mead, London & Mead Attorneys at Law (February 3, 2003)).

[422] *See e.g.*, *Mitchell v. United States*, 526 U.S. 314 (1999) (stating that the Fifth Amendment allows adverse inferences in civil actions when parties refuse to testify in response to probative evidence offered against them); *Baxter v. Palmigiano*, 425 U.S. 308, 318-19 (1976) (same).

[423] *See LiButti v. United States,* 107 F.3d 110, 120-25 (2d Cir. 1997) (allowing the invocation of the privilege to be made known to the jury and adverse inferences to be drawn when it is invoked be a non-party who was a former employee of a company who is a party in the litigation); *Cerro Gordo Charity v. Fireman's Fund American Life Ins. Co.,* 819 F.2d 1471, 1481-82 (8th Cir. 1987) (same); *RAD Servs., Inc. v. Aetna Cas. And Sur. Co.*, 808 F.2d 271, 275 (3d Cir. 1986) (same); *Brink's, Inc. v. City of New York*, 717 F.2d 700 707-10 (2d Cir. 1983) (same).

[424] *United States ex rel. Bilokumsky v. Tod,* 263 U.S. 149, 153-154 (1923), *overruled on other grounds,* 468 U.S. 1032 (1984), *quoted with approval in Baxter,* 425 U.S. at 319.

[425] Exh. No. CA-215 (Motion of California Parties to Compel Attendance of John Stout, Senior Vice-President at Reliant, at Deposition); Exh. No. CA-337 (Discovery Master Notice Confirming Ruling on Motion to Compel Attendance at Deposition (Feb. 24, 2003).

to the ISO Board, this Commission, and Congress[426] as a result of the Commission's conclusion that "Reliant employees intentionally withheld capacity from the day-ahead market to manipulate prices."[427] The Commission should give no weight to Mr. Stout's previous submissions explaining price volatility for reasons other than market manipulation and natural gas pricing based on spot market pricing, as even Mr. Stout testified that he is worried about other information about Reliant trading practices about which he remains unaware that would demonstrate the inaccuracy of his prior testimony and submissions.[428]

Even where discovery has not been refused outright in this case, production has been unreasonably delayed, and requested information has been provided in a piecemeal fashion designed to increase the burden of processing and analyzing the evidence. The production of recorded trader telephone conversations is illustrative. The Discovery Master noted that tape-recorded conversations by traders might be the most important form of discovery in this case.[429] Not only were the California Parties prevented from obtaining everything that the Commission Staff had obtained, the process of obtaining recorded conversations from sellers was excruciatingly slow. Many sellers reviewed every recording for privilege even though it appeared almost nothing on the trader tapes was privileged and almost no privilege logs detailing the basis for withholding recorded calls on the basis of privilege have been produced. And the actual review process -- by both the producing party and the California Parties -- has been

[426] Exh. No. CA-284 at 3, 5, 9-11, 13, 15-29, 35-41, 42-69, 71-73, 75-79, 81-83, 85-89 (Deposition of John Stout (February 27, 2003)).

[427] *Fact-Finding Investigation,* 102 FERC ¶ 61,108 at P 13.

[428] Exh. No. CA-284 at 91-95 (Stout Dep. at 202:5-204:7).

[429] Exh. No. CA-211 (Excerpt from transcript of Discovery Master's 17 December 2002 hearing: ". . . there is nothing more relevant to the kind of issues we are considering here than trader tapes would be.").

constrained by the limitations of the play-back machines necessary to review the recorded conversations.[430]

Acknowledging these limitations, the California Parties did not ask to review all recorded conversations for all the days of the relevant time period, which totaled some 536 days. The California Parties winnowed their request to each seller to between twelve and forty-six days during the relevant time period. For a number of reasons not even all of those recorded conversations were produced or reviewed for this submission.[431]

For example, the California Parties requested that Powerex provide access to a total of twenty-six selected days of recorded conversations. On January 30, 2002, Powerex made two days of such recorded telephone conversations available for review in Vancouver, British Columbia by the California Parties. Powerex reported that it took seven-and-a-half days to review a single day of recorded trader conversations for privilege. The California Parties selected eighteen calls (approximately one hour of recorded time) for production. It then took Powerex nine days to produce copies of those selected calls. To speed the process, the California Parties asked Powerex to produce the channels for only five traders for the remaining days. On February 19, 2003, Powerex made six additional days of recorded conversations for the five traders available for review in Vancouver. On February 28, 2003, Powerex made four additional days of recorded conversations for the same five traders available for review in Vancouver, but refused to copy any requested calls identified on February 28, 2003. The California Parties sought and obtained an emergency order from the Discovery Master requiring Powerex to copy and deliver to the California Parties any calls selected on February 28, 2003. Powerex will

[430] Phillips Decl. ¶¶ 3-4.

[431] *Id.* at ¶ 5.

obviously fall far short of producing recorded telephone conversations for even the days selected by the California Parties.[432]

The California Parties asked Duke to provide access to 41 selected days of recorded conversations during the relevant time period. To date, however, Duke has produced only nine days of recorded conversations.[433]

Coral shut down access by the California Parties to its tapes of recorded trader conversations after permitting them an initial but brief review in mid-February, 2003. The California Parties were forced to move to compel further access, which was granted in the last week of the discovery period. The California Parties conducted that review and identified tape recorded conversations that they believe relate to market manipulation by Coral. Even so, the California Parties will have reviewed only a fraction of Coral's recorded conversations before the close of discovery.[434]

Finally, a number of sellers produced massive materials too late for it to be meaningfully reviewed. In the last week of the discovery period, the California Parties received substantial supplemental responses to Data requests first issued in November and early December 2002, which have included massive documentation and tape recordings, very little of which could be reviewed meaningfully prior to this submission.[435]

There is no question that for strategic, logistical or just plain practical reasons, much of the iceberg has remained submerged.

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[432] *Id.* at ¶ 6.

[433] *Id.* at ¶ 7.

[434] *Id.* at ¶ 8.

[435] *Id.* at ¶¶ 9-10.

D. The Commission's Restrictions Also Have Impeded Effective Discovery

The Commission granted the California Parties 100 days to conduct discovery, assimilate what they had obtained, and make this voluminous submission. While the sellers' conduct outlined above has impeded the California Parties in that effort, the Commission's refusal to allow the California Parties to fully inherit the discovery that the Commission Staff had already obtained, forcing them to start from scratch, also has impeded their efforts. The Commission would not review the Discovery Master's refusal to grant the California Parties access to transcripts and notes of recorded telephone conversations (which, as discussed above, forced an arduous and fragmented review process).[436] And, it refused the California Parties access to the deposition transcripts already assembled by Commission Staff and documents created for the Commission Staff Investigation, even though the Commission's *November 20th Order* directed that no duplicative discovery should occur in this abbreviated proceeding.[437]

Access to documents created for the Commission Staff by the sellers was refused because of its alleged chilling effect. Respectfully, the California Parties do not believe that "chilling effect" is relevant to uncovering the truth. The sellers have legal obligations to cooperate with Staff and to tell the truth. An argument by the sellers that they would be deterred in doing so if the information they share with the Staff is discoverable simply suggests how flimsy is the sellers' commitment to disclosing the truth. Access to the deposition transcripts of witnesses would have substantially aided the California Parties in focusing their investigation and assimilating relevant information earlier. The Discovery Master's and Commission's orders also

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[436] *See generally* Exh. No. CA-211 (Excerpts from transcript of Discovery Master's December 17, 2000, hearing regarding trader tape transcriptions).

[437] *See November 20 Order,* 101 FERC at 61,737.

allowed sellers to slow-walk discovery (as noted above) under the pretext that they were performing it for the first time, knowing full well that much of their work had already been done for the Commission Staff.

In sum, the record provides a surfeit of evidence justifying the full remedy requested by the California Parties. That remedy is also warranted by sellers' misleading conduct, their destruction of evidence, and their prevention of discovery. If the Commission has any doubt regarding the adequate evidentiary basis for the full remedy requested by the California Parties, it should order further proceedings to adduce further evidence that lies beneath the tip of the iceberg presented by this submission.

VI. THE COMMISSION SHOULD RECALCULATE THE MARKET-CLEARING PRICES FOR THE PERIOD OF MAY 1, 2000 THROUGH OCTOBER 1, 2000 BECAUSE OF PERVASIVE TARIFF VIOLATIONS

There is now no room for doubt. The evidence presented by the California Parties proves that tariff violations during the period of, at a minimum, May 1, 2000 through June 20, 2001, were widespread, pervasive, interrelated, and insidious. Almost all sellers violated Commission-approved tariffs by withholding energy, ancillary services, and transmission in the successful exercise of market power and by engaging in an astounding variety of market manipulation schemes made possible, and profitable, by their withholding. Whether given names that evoke pop culture villains, of juvenile fantasy such as "Death Star" and "Get Shorty," or starkly descriptive terms such as "Schedule Bogus Load," these tariff violations and schemes were pervasive and tainted prices in all hours and across multiple markets, resulting in unjust and unreasonable prices that the ISO and PX charged to their captive customers. Additionally, they resulted in rates charged through the ISO and PX that differed significantly from those that would have been charged had sellers followed the tariffs -- in other words, they resulted in rates significantly above the filed rates.

The Commission previously took the position that it was powerless to do anything about the unjust and unreasonable, and thus unlawful, rates charged prior to October 2, 2000 because the refund provision of section 206 of the FPA only provides for refunds following the refund effective date.[438] Although the Commission acknowledged that it does have authority to order sellers to disgorge amounts collected as the result of tariff violations, even when such violations occurred prior to the refund effective date,[439] it declined to do so because it believed that it lacked evidence that sellers had violated any tariffs.[440] That evidence is now available and compelling.

In addition to explicit violations of the specific terms of the ISO and PX Tariffs, multiple sellers engaged in multiple schemes that required them to provide false information to, and to mislead, the ISO and PX. As Chairman Wood testified to Congress on May 15, 2002, such practices represent market manipulation and are either illegal or should be.[441] He further testified

[438] *See*, *e.g., November 1st Order*, 93 FERC at 61,370-71; *July 25th Order*, 96 FERC at 61,504-511.

[439] *See, e.g., July 25th Order*, 96 FERC at 61,507-08 (explaining that the Commission can "take retroactive action to address circumstances where a seller . . . violated . . . rules in applicable tariffs. However, it has not been demonstrated they any conditions or limitations of sellers' market-based tariffs have been violated. . . . Thus, there is no basis for finding that the sellers acted inconsistently with Commission filed tariffs. . . .").

[440] *See, e.g., id.* The California Parties contend that, in addition to the ISO and PX Tariffs, sellers violated their own market-based rate tariffs and possibly other tariffs, as well. However, the Commission has held that the applicable tariffs in this case are the ISO and PX Tariffs. *See*, *e.g*., *July 25th Order*, 96 FERC at 61,513 (explaining that "[h]ere, the central transactions, wholesale sales of energy in interstate commerce, were governed by FERC-approved rules and a FERC-jurisdictional ISO and PX"); *December Reh'g Order*, 97 FERC at 62,183 (requiring all sellers to pay refunds because, inter alia, the "only filed rates in this case consisted of the ISO and PX tariffs").

[441] *Hearing to Examine Manipulation in W. Markets During 2000-2001 as Revealed in Recent Documents Made Pub. In the Course of Investigation Underway at FERC*: Hearing before the Senate Comm. On Energy & Natural Res., 107th Cong. 187 (May 15, 2002), Tr. at 49:6-14; 64:2-18.

that practices involving "deliberate misrepresentation . . . might be a longer way of saying fraud. . . . I think clearly that type of activity is wrong."[442]

The evidence presented today by the California Parties shows that the price spike that began in May of 2000 was due in very large part to fraudulent behavior that relied on evading or violating the market rules approved by this Commission. This evidence provides the Commission with an additional basis -- and an important reason -- for ordering a remedy for the pre-October 2, 2000 period. The Commission must now turn its attention to the fashioning of an appropriate remedy -- one that will put both buyers and sellers in the position that they would have been in if the sellers had not violated tariffs and manipulated the markets for an essential service.

A. The Commission Should Provide a Remedy for the Pervasive Tariff Violations That Will Put Both Buyers and Sellers in the Position That They Would Have Been in if Sellers Had Followed the Tariffs' Rules

This Commission's most important job -- indeed, its reason for being -- is to protect consumers.[443] The Commission has already provided consumers with a remedy for many of the improper sales of 24 hours or less made through the ISO and PX spot markets following October 2, 2000, which is being adjudicated. Now, the Commission must also provide consumers with a

[442] *Examining Enron: Devs. Regarding Elec. Price Manipulation in Cal.*: Hearing before the Senate Subcomm. On Consumer Affairs, Foreign Commerce & Tourism of the Comm. On Commerce, Science, & Transp., 107th Cong. 187 (May 15, 2002), Tr. at 187:6-20. *See also,* Letter from Pat Wood, III, FERC Chairman, to the Hon. John D. Dingell, U.S. Congress at 7, filed in Docket No. PA02-2-000 (June 5, 2002) (explaining that some of "the strategies described in the Enron memos appear to depend on . . . providing false information to the ISO. Thus, these strategies rely on evading or violating the market rules rather than market design flaws").

[443] *See, e.g., Maine Pub. Serv. Co.*, 579 F.2d at 664 (holding that the "primary purpose of [the FPA] is to protect consumers from excessive rates and charges -- any protection received by a utility is incidental"); *Nat'l Ass'n for the Advancement of Colored People v. FPC*, 520 F.2d 432, 438 (D.C. Cir. 1975) (holding that the "Commission's primary task . . . is to guard the consumer from exploitation by non-competitive electric power companies . . . ."), *aff'd*, 425 U.S. 662 (1976).

remedy for the pervasive rule violations and market manipulation by sellers from May 1, 2000 through October 1, 2000. As shown below, the only practical and effective way to do this is to order the ISO and the PX to reprice all sales during this period, applying the same MMCP methodology as is ultimately adopted to mitigate sales from October 2, 2000 through June 20, 2001, and to order all sellers to disgorge amounts charged above the MMCP.

1. During the period from May 1, 2000 through October 1, 2000, California consumers were charged at least $2.374 billion above the rates that would have obtained had sellers not engaged in tariff violations and market manipulation

During the period from May 1, 2000 through October 1, 2000, sellers overcharged California consumers for an essential service, regulated by this Commission, by amounts that shock even the most jaded conscience.[444] These overcharges financially crippled Edison and drove PG&E and, ultimately, the PX into bankruptcy. Small businesses were forced to shut down, leaving hundreds of workers jobless. California's economy, the sixth largest in the world, is still reeling from the effects of these overcharges. "No power market in history led to price increases as large and sustained as did the Western power markets in 2000-2001."[445] It is imperative that the Commission provide an effective remedy.

During this period sellers through the ISO and PX charged $2.374 billion above the level that would be allowed by application of the current MMCP (exclusive of changes to the natural gas proxy) to this period.[446] Sellers overcharged $368 million through the PX's day-ahead and

[444] *See, e.g., Koch Gateway Pipeline Co. v. FERC*, 136 F.3d 810, 817 (D.C. Cir. 1998) (holding that restitution is appropriate where "money was obtained in such circumstances that the possessor will give offense to equity and good conscience if permitted to retain it").

[445] Fox-Penner Testimony, Exh. No. CA-1 at 61.

[446] *See* Stern Testimony, Exh. No. CA-3 at 6:5.

hour-ahead markets.[447] They overcharged an astonishing $1.484 billion through the ISO's real-time energy market and $522 million through the ISO's Ancillary Services markets.[448] If the Commission adopts Staff's August 13, 2002 recommendation to revise the gas price proxy, refunds owed by sellers increase by an additional $1.737 billion.[449]

2. Given the single-price auction approved for both the ISO and PX Tariffs, the interrelated nature of California's various electricity and transmission markets, and the pervasive nature of the tariff violations, the Commission must order the ISO and PX to reprice all sales from May 1, 2000 through October 1, 2000 and must order all sellers to disgorge amounts charged above the mitigated market-clearing price

When it approved the ISO and PX Tariffs, the Commission approved a single-price auction mechanism for setting the market-clearing price that all sellers would receive and that all buyers would pay. This mechanism was designed to introduce increased efficiency into California's electricity markets, but one side-effect of the single-price auction is that market manipulation and tariff violations by one seller can -- and, in fact, did -- result in all buyers paying and in all sellers receiving rates that differ from the filed rate. The Commission's methodology for mitigating rates charged from October 2, 2000 through June 20, 2001 recognized this, and corrected for it by requiring the ISO and PX to reprice all sales above the MMCP and by requiring all sellers to disgorge amounts charged above the MMCP.[450] The Commission must now do the same for sales through the ISO and PX during the May 1, 2000

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[447] *See id.* at 6:2.

[448] *See id*. at 6:3-6:4.

[449] *See id.* at 89:6-19.

[450] *See, e.g., July 25th Order*, 96 FERC at 61,512 (explaining that the Commission's methodology "revises the market clearing price that all market participants previously agreed to accept for their sales").

through October 1, 2000 period. Anything less will fail to protect consumers and will permit sellers to retain an illegal windfall.

Similarly, the interrelated nature of California's electricity and transmission markets resulted in a situation where the bad acts of one seller allowed other sellers to receive, and caused all buyers to pay, a rate different from, and significantly higher than, the filed rate. For example, the sequential nature of the ISO and PX markets often led sellers to withhold supply from the PX's day-ahead market, thereby increasing not only PX day-ahead prices, but also ISO real-time, Ancillary Services, and OOM prices, as well as long-term forward prices.[451]

Many of the manipulative strategies of sellers were enabled, that is, were made profitable, by the same market conditions that allowed the sellers to become pivotal and therefore to profitably exercise market power.[452] Additionally, the sellers' various strategies were created to exacerbate the same sort of artificial shortages that the sellers created through withholding and are, themselves, an exercise of market power.[453] Dr. Fox-Penner explains that:

> There is a close relationship between market behavior by sellers that withdrew capacity profitably from the California markets, and manipulative trading strategies that exacerbated or profited from the induced shortages, congestion, and high prices. Pivotal sellers' ability to exercise market power was enhanced by manipulation strategies and manipulation strategies were founded on and made profitable by the exercise of market power. Most of the manipulation strategies would be far less profitable were it not for the market power exercised by pivotal sellers. Conversely, sellers had to determine the profitability of withholding supply by

[451] Fox-Penner Testimony, Exh. No. CA-1 at 5:1-22.

[452] *Id.* at 3.

[453] *Id*. at 32-34.

> factoring in the benefits from manipulation strategies that also impacted supplies and raised prices.[454]

Thus, for example, during the summer of 2000, Dynegy, Reliant, Mirant, and AES/Williams first withheld capacity from the PX's day-ahead market and then engaged in frequent real-time bidding behavior designed to raise real-time prices substantially and successfully, including withholding bids during ISO-declared system emergencies, altering their bids as system conditions changed, and "Inc-ing" load.[455]

The relationship between the wide variety of tariff violations related to withholding and the other market-manipulation strategies, which involved a large number of sellers in the same markets during the same time periods, means that the impacts of one seller's actions cannot be decoupled from the impacts that flow from the actions of other sellers.[456]

> The closely woven relationships between manipulation and withholding behaviors, and the fact that multiple sellers engaged in both types of practices at the same time, renders it impossible to isolate the economic impact of one particular seller or one episode of market power exercise or manipulation. The impacts are also blended across time in important ways. Some of the manipulation strategies were systematic and continual or near continual. And the strategies could have an impact on an array of sellers who had not originally participated in the strategy.[457]

Further, the periods of greatest turmoil in the California markets are those periods when many things tended to happen at once. For example, during the summer of 2000, Williams/AES, Mirant, Reliant, and Dynegy withheld power from the market on many occasions.[458] During this

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[454] *Id.* at 11:5-16.

[455] *See id.* at 164-174.

[456] *See id.* at 34-36

[457] *Id.* at 10-11.

[458] *See id.* at 87-79.

same period, several other sellers engaged in frequent trading schemes such as "Ricochet."[459] However, during September and October of 2000, demand dropped briefly to the point where pure withholding was not as profitable; Williams/AES, Mirant, Reliant, and Dynegy temporarily reduced their withholding and the other sellers also temporarily stopped engaging in their trading schemes.[460]

Because it is impossible to quantify the effects of all of the multiple specific tariff violations, the Commission must order the ISO and PX to reprice all sales from May 1, 2000 through October 1, 2000 that were above the MMCP and order sellers to disgorge all amounts charged above the MMCP. This is the only practicable way for the Commission to restore buyers and sellers to the position that they would have been in had sellers had not violated the ISO and PX Tariffs.

Further, the Commission has already held that sellers may, at the end of this proceeding, choose to receive cost-based rates for their sales.[461] The Supreme Court has held that cost-based rates:

> which enable its company to operate successfully, to maintain its financial integrity, to attract capital, and to compensate its investors for the risks assumed certainly cannot be condemned as invalid, even though they might produce only a meager return on the so-called fair value rate base.[462]

[459] *See id.* at 101-108.

[460] *See id.* at 38-39.

[461] *See, e.g., July 25th Order*, 96 FERC at 61,518.

[462] *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 605 (1944).

The Commission should, however, now find that any seller wishing to file for cost-based rates must do so for its entire portfolio the entire period from May 1, 2000 through June 20, 2001.[463]

B. The Commission May Require All Sellers to Disgorge Amounts Collected As a Result of Violations of the Filed Rate Because All Sellers Agreed to Accept the Single Market-Clearing Prices Established by the ISO and PX Tariffs

During the period of May 1, 2000 through October 1, 2000, no seller was required to sell into the ISO and PX markets. The sellers who did so voluntarily agreed to be bound by the ISO and PX Tariffs in order to reap the benefits of selling into the markets operated at that time by the ISO and PX.[464] These sellers were required to execute contracts with the ISO and PX under which they agreed to be bound to the terms of the ISO and PX Tariffs, as those tariffs may be modified from time to time by the Commission. In the PX, the sellers were required to sign a PX Participation Agreement that bound them to comply with the PX Tariff and to accept the single-auction market-clearing price calculated thereunder. In the ISO, any entity selling or scheduling into the ISO markets was required to sign, or to be represented by an entity that had signed, a Scheduling Coordinator Agreement which similarly required adherence to the ISO Tariff and acceptance of the single-auction market-clearing price calculated thereunder.

These contracts provide a legal basis upon which the Commission can and should order an effective remedy for the sellers' violations of the ISO and PX Tariffs. By agreeing to abide by the terms of these tariffs, all sellers agreed to charge the rates derived through adherence to

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[463] *Cf. July 25th Order*, 96 FERC at 61,518 (requiring sellers who seek cost-based rates to do so for the entire refund period).

[464] *See also December Rehearing Order*, 97 FERC at 52,182 (2001) (finding that "all sellers . . . were on notice that if they participated in those markets they would do so subject to the terms of the ISO and PX Tariffs. . . .").

these tariffs; as shown above, in spite of this contractual obligation, many sellers engaged in multiple tariff violations that resulted in rates significantly above the filed rate. Similarly, by agreeing to abide by the terms of these tariffs, all sellers agreed to be subject to all permissible changes to the pricing provisions of those tariffs, including changes to the single-auction market-clearing price necessitated by the sellers' tariff violations -- whether their own or those of other sellers.

Requiring all sellers to disgorge all amounts charged above the MMCP will also be consistent with Commission precedent. The Commission has held that the filed rate doctrine applies to the market-based rates charged through the ISO and PX.[465] Under the filed rate doctrine, no seller is entitled to charge or receive any rate other than the filed rate, regardless of whether the incorrect charge was caused by that seller or by another.[466]

Additionally, the Commission has held, and has reaffirmed on rehearing, that all sellers, regardless of whether they were public utilities or government entities, are required to pay refunds for the unjust and unreasonable rates charged during the refund effective period. When it made this finding, the Commission relied upon the fact that all sellers chose voluntarily to sell into the ISO and PX markets and that because, under the pricing terms of these tariffs, all sellers had charged unjust and unreasonable rates it was necessary to establish "a revised method for calculating the just and reasonable clearing prices to be applied in [the ISO and PX] markets. . . .

[465] *July 25th Order*, 96 FERC at 61,506 (concluding that "the filed rate doctrine applies to the market-based rates at issue here"). The California Attorney General has argued before the Commission that the filed rate doctrine does not apply to market-based rates such that the rates in question here were invalid *ab initio*. Assuming that the Commission is correct that the filed rate doctrine does apply, the Commission must enforce it here.

[466] *See*, *e.g.*, *id*. at 61,505 ("[t]aken together, the [filed rate] doctrine and its corollary [rule against retroactive ratemaking] stand for the proposition that a utility may charge only those rates that are on file with and approved by the Commission. . . .").

Our action thus revises the market-clearing prices that all market participants previously agreed to accept for their sales."[467] The Commission also noted that, "it is fair that all those who benefitted from this market also bear responsibility for remedying any potential unlawful transactions that might have occurred in the market."[468] Finally, the Commission held that requiring all sellers to accept the market-clearing price that would have been set absent market manipulation:

> promotes the underlying goals of the FPA. Under California's restructuring system, wholesale sales of electric energy were transacted largely through hourly single price auctions, which meant that all bidders into these spot markets received the same price for a specific sale. . . .
>
> To the extent the Commission determines refunds are an appropriate remedy for that sale, <u>consumers can only be made whole by refunds from all sellers who received the excessive price</u>.[469]

The Commission also found that individual bad acts in each specific hour were not necessary to a determination that all sellers, having agreed to accept the same price, could be made to return charges that should never have been charged in the first place. It explained that remediation of such rates was:

> restitutionary, rather than punitive, relief. Because the statutory goal of [recalculating the market-clearing price obtained in the single-price auction] is customer restitution, the Commission does not set refund levels based on a degree of culpability regarding overcollections. Rather, our refund task in this and other cases is to determine objectively the amount of overcollections that should be returned to customers. Accordingly, we decline the government

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[467] *Id* at 61,512.

[468] *Id.* at 61,513.

[469] *Id.* (emphasis added).

> entities' invitation to determine refunds based on some unidentified measure of blameworthiness.[470]

Concerning the rates charged from May 1, 2000 through October 1, 2000, the same reasoning applies and the same remedy is necessary. In a situation where the interrelated bad acts of multiple sellers over many months resulted in all consumers paying rates ruinously above that which would have resulted if the market's rules had been obeyed, the Commission must revise the market-clearing prices that all market participants previously agreed to accept for their sales. Similarly, the Commission need not find that each seller engaged in tariff violations in each hour before it may order all sellers to disgorge rates charged above the MMCP. The statutory goal of customer restitution remains most important and neither the Commission nor any court has ever found that sellers must have engaged in some unidentified measure of blameworthiness before they may be forced to return rates charged above the filed rate.

C. It is Vital that the Commission Enforce Its Filed Tariffs and Rules for the Period from May 1, 2000 through June 20, 2001

The evidence presented today by the California Parties provides the Commission with what may well be its last best chance to put things right in California. It also provides the last best chance for the Commission to demonstrate that it can and will function as an effective regulator of market-based sales of electricity in large, regional markets. If the California sellers are allowed to keep their ill-gotten gains, sellers all over North America will conclude that violating ISO and RTO tariffs is well worth the risk. Conversely, states across America will decide that RTOs, which leave this Commission with immense control over rates, are definitely not worth the risk.

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[470] *December Reh'g Order*, 97 FERC at 62,185 (emphasis added).

The courts have repeatedly held that the Commission may only allow sellers to charge market-based rates if the Commission has effective procedures in place to ensure that sellers will charge only legal rates.[471] Consequently, requiring all sellers to accept the recalculated MMCPs for the period of May 1, 2000 through October 1, 2000 is not only the right thing for the Commission to do to protect California consumers; it is the right thing for the Commission to do to preserve restructuring and emerging competitive markets nationwide.

Further, the case at bar presents an almost classic case of the sort of situation that cries out for remediation. In *Koch Gateway Pipeline,* the D.C. Circuit described the sort of situation where it is appropriate to order restitution for tariff violations: "the general rule is that agencies should order restitution only when money was obtained in such circumstances that the possessor will give offense to equity and good conscience if permitted to retain it."[472] Here, sellers -- with a shocking disregard for reliability and for the effect that their actions would have on their captive customers, on the economy of the West, and on this Commission's authority -- repeatedly broke and thwarted the rules in ways designed to allow them to collect illegal profits. Allowing them to keep the spoils of their misbehavior would surely give great offense to equity and good conscience.

In *Towns of Concord, Norwood, and Wellesley, Massachusetts v. FERC*, the court explained that for the Commission to determine that violations of the filed rate doctrine need not

[471] *See*, *e.g*., *Farmers Union Central Exch., Inc. v. FERC*, 734 F.2d 1486, 1530 (D.C. Cir. 1984) (holding that "presumed market forces may not comprise the principal regulatory constraint. Departures from cost-based rates must be made, if at all, only when the non-cost factors [that will restrain rates to within a zone of reasonableness] are clearly identified and the substitute or supplemental ratemaking methods ensure that the resulting rate levels are justified by those factors"), *cert. denied sub nom. Williams Pipe Line Co. v. Farmers Union Cent. Exch., Inc*., 469 U.S. 1034 (1984).

[472] 136 F.3d at 817.

be accompanied by restitution, the Commission must be able to find that such a course of action would not violate the considerations that underlie the filed rate doctrine, including "preservation of the agency's primary jurisdiction over reasonableness of rates and the need to insure that regulated companies charge only those rates of which the agency has been made cognizant."[473] The Commission's discretion not to order restitution in such a filed rate doctrine case was limited to those situations where there was no "conflict with the . . . core purpose of the statute. . . ."[474] Here, failure to require all sellers to reprice their sales to comply with the ISO and PX Tariffs would indeed make it more difficult for the Commission in the future to carry out its primary jurisdiction over rates and would conflict with the core purposes of the FPA -- to provide the public an opportunity to know what rates they are going to be charged through Commission-approved markets and to ensure just and reasonable rates.

Perhaps in the end this case which in many ways is one of first impression, boils down to a simple question: Given that pervasive tariff violations resulted in all sellers receiving a rate above the filed rate, should sellers, even those few sellers innocent of any market manipulation or tariff violation, be allowed to keep the windfall that they obtained as the result of tariff violations by other sellers or should this Commission, statutorily charged by Congress to protect consumers, require all sellers to disgorge the windfalls created by the pervasive tariff violations? The answer is obvious and the time to act is now.

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[473] 955 F.2d 67, 71 (D.C. Cir. 1992).

[474] *Id*. at 76.

VII. THE COMMISSION SHOULD PROVIDE A REMEDY FOR THE $2 BILLION IN UNJUST AND UNREASONABLE RATES THAT SELLERS CHARGED CERS

Because the sellers charged such unjust and unreasonable rates for such a long period of time, PG&E and Edison were driven to insolvency. When this happened, California was faced with an economic and health and safety crisis of historic proportions. Sellers began refusing to sell to the ISO unless the ISO could produce a creditworthy counterparty; the PX, California's only organized spot forward market, ceased operations and declared bankruptcy. In an effort to keep the lights on and to preserve the health and safety of the nation's most populous state, California turned to CDWR (acting through the California Energy Resources Scheduling Division (CERS)) to act as a creditworthy counterparty for the ISO's purchases and to acquire spot forward power previously acquired by the PX. Mr. William Green, in testimony filed today by the California Parties, explains the facts concerning CERS's purchases of energy from sellers beginning on January 17, 2001 and ending on June 20, 2001.[475]

The Commission previously found that sales to CERS should not be mitigated. The Commission stated that such sales were outside the scope of this proceeding and further relied upon the fact that, for some period of time, staff from CERS was present on the ISO's trading floor. Additionally, the Commission found that the equities of the situation did not warrant making such sales subject to refund. The evidence presented today by the California Parties demonstrates overwhelmingly that such sales should be subject to refund.

First, such sales are, in fact, within the scope of this proceeding. In its *August 23rd Order* establishing these proceedings, the Commission stated that its goal was "to detect and, to the extent [possible] within our jurisdiction, to resolve as expeditiously as possible, any defects in

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[475] Prepared Testimony of William Green (Green Testimony), Exh. No. CAL-13.

the operation of the competitive power markets in California,"[476] which certainly is broad enough to include the sales to CERS. When this proceeding began, the ISO and PX spot markets were the only California markets, due primarily to the requirement that the three California IOUs buy all of their power from the ISO and PX. Thus, because it could not list all the possible sellers, San Diego Gas & Electric Company (SDG&E) captioned its complaint against all sellers into the ISO and PX markets.[477] SDG&E's complaint is against the sellers, not against the specific markets, and those same sellers continued to engage in withholding and market manipulation schemes that resulted in unjust and unreasonable sales through CERS. Those sales are, therefore, within the scope of this proceeding.

Second, the presence of CERS staff on the ISO's trading floor for a limited period of time is irrelevant to the question of whether the sales to CERS should be subject to refund. The FPA provides that all sales must be just and reasonable and that any sale that is not just and reasonable is unlawful.[478] There is no exception that allows sellers to make unjust and unreasonable sales when buyers engage in behavior later found to be prohibited. Just and reasonable rates are a

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[476] *San Diego Gas & Elec. Co*., 92 FERC ¶ 61,172 at 61,603 (2000) (*August 23rd Order*).

[477] SDG&E explained in a note that its complaint sought "amendment to the market-based rate schedules of all sellers in the markets for energy and ancillary services conducted by the California Independent System Operator Corporation and the California Power Exchange. Listing of all such sellers would be impracticable." *Complaint* at 1 n.1, filed in Docket No. EL00-95-000 (Aug. 2, 2000). SDG&E thus referred to the markets then-operated by the ISO and PX as a way of capturing all sellers making market-based sales into California. No one could have predicted, at that time, that within a few months the sellers would have charged such unjust and unreasonable rates for so long that they would cause the demise of the PX, and the uncreditworthy status of the ISO, requiring CDWR to step in and begin purchasing California's short-term power in markets that were previously operated by the ISO and the PX. Thus, inclusion of the CDWR sales within the scope of this proceeding will not expand the scope of the proceeding but will keep the scope of customer protection from shrinking due, not to any rational finding that such protection was no longer needed, but merely to circumstances beyond the control of California's consumers.

[478] 16 U.S.C. § 824d (a) (2000).

right guaranteed by law. They are not a carrot, and unjust and unreasonable rates are not a stick to be used against customers. Further, no seller has pointed to any effect that CERS' presence on the ISO trading floor had on sales -- either positive or negative. This stands in sharp contrast to the evidence presented today showing that the sellers' sharp and illegal practices drove rates to unimaginably-high unjust and unreasonable levels.

And, it is important to understand why CERS staff was on the ISO trading floor. Mr. Green explains in his testimony that:

> CERS served as the creditworthy backer of the ISO when the ISO acquired energy for balancing in real time (BEEP transactions) or through out-of-market purchases. In addition to backing BEEP purchases made by the ISO, CERS purchased directly from sellers to meet essentially the same needs, and did so at the direction of the ISO. In many instances during this time period, sellers refused to sell energy to the ISO and insisted on dealing with CERS. CERS OOMs served the same function as these ISO purchases, and in fact either the PX (for day-ahead and hour ahead purchases) or the ISO (for real-time and OOM) performed that function itself before CERS was created.[479]

It was the sellers who necessitated CERS' presence on the ISO trading floor so that real-time purchases could be made from sellers demanding a creditworthy counterparty, those same sellers having first driven PG&E and Edison -- and thus the ISO and PX -- to insolvency.

Finally, the evidence presented today makes it clear that the equities of this situation weigh strongly in favor of making the sales to CERS subject to refund. This is so because it was misbehavior of the sellers -- now-thoroughly documented -- that led to the CERS purchases in the first place.

For example, Dr. Fox-Penner testifies that during the period when CERS was making purchases to replace the purchases previously made by the ISO and PX "there is ample evidence

[479] Green Testimony, Exh. No. CAL-13 at 4:1-8.

that physical and economic withholding by the Big Five and by other major suppliers continued to occur."[480] He also explains that at least 20 sellers, including two of the Big Five generators, used the Ricochet strategy "to evade the soft caps and refund liabilities that began in December 2000 and continued into Spring 2001, when many sales to the [CERS] appear to have been exported from [California] in the first place and then resold to CERS at a lucrative markup."[481] Additionally:

> During the CERS period, an additional incentive to engage in Ricochet trades existed. CERS was purchasing large amounts of OOM imports on behalf of the ISO, and the use of Ricochet trades easily allowed suppliers to sell power from in-state resources as OOM imports to CERS. This yielded two additional benefits for the supplier: (1) immediate payment; and (2) avoidance of potential mitigation exposure since sales to CERS was believed to be less likely subject to refunds under FERC orders.[482]

Finally, Dr. Fox-Penner testifies that market manipulation schemes involving so-called "self-help" sprang up during the CERS period. He explains:

> Under this strategy a generator would be asked to provide power under purchases made by CERS, often at the request of the ISO. The generator would then decide to produce <u>less</u> than the instructed amount of generation while still attempting to obtain payment for the full amount from CERS. This shortfall in RT generation . . . [then needed] to be supplied by the ISO and often, at the ISO's instructions, [would] have to be procured and paid for

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[480] Fox-Penner Testimony, Exh. No. CA-1 at 75.

[481] *Id.* at 6.

[482] *Id.* at 7. Mr. Green, who was employed by the ISO until late April 2001, confirms that numerous sellers refused to sell to the ISO and insisted on selling imports to CERS instead: "I am personally aware that Powerex, LADWP, BPA, Public Service New Mexico, Puget and PacifiCorp…during my tenure at the ISO while CERS was in existence (and therefore standing ready to provide payment for ISO purchases) simply refused to sell to the ISO and insisted on selling instead to CERS," and that CERS "imported and purchased in real time" substantial quantities from many of these same sellers. Green at 9:16-10:2. ISO employee James Detmers concurred in deposition testimony that sellers insisted on selling to CERS, to the exclusion of the ISO. Exh. CA-342.

> (again) by CERS as an additional OOM purchase at uncapped prices.
>
> The ISO subsequently [charged] the cost of imbalance energy to the generator, which [declined] payment and [insisted] that the owed amount be treated as an offset against the generator's amounts due from the ISO.
>
> * * *
>
> This is possible because CERS needs to rely on the generator's representation of performance because the agency neither can independently verify that the generator actually produced the agreed upon and paid-for energy nor, due to confidentiality provisions, is able to obtain from the ISO the generator's metered output data.[483]

Having precipitated the ISO's credit crisis and the PX's untimely demise, the sellers should not be rewarded by reliance upon an incorrect and hyper-technical reading of the scope of this proceeding. Equity calls for their unjust and unreasonable sales to CERS to be made subject to refund.

And, the question of whether such sales are subject to refund is vitally important to California consumers. Dr. Stern testifies that application of the current MMCP to CERS' short-term purchases would result in a refund to California customers of $1.263 billion.[484] If the Commission adopts Staff's August 13, 2002 recommendation to the gas price proxy, refunds

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[483] *Id.* at 78-79.

[484] *See* Stern Testimony, Exh. No. CA-3 at 6:20-24. In *Puget Sound Energy, Inc.,* EL01-10 *et al.,* the California Attorney General, the Electricity Oversight Board, and the California Public Utilities Commission argued for mitigation of a subset of CERS' total short term purchases, those made in the Pacific Northwest and thus eligible for mitigation as "spot market bilateral purchases" under the terms of the *July 25th Order,* 96 FERC at 61,520 (preliminary evidentiary proceeding to determine whether there may have been unjust and unreasonable charges for spot market bilateral sales in the Pacific Northwest for the period December 25, 2000 - June 20, 2001). All of CERS' short term purchases during the refund period should be subject to mitigation, for all of the reasons stated herein, but this subset of purchases should not, of course, be mitigated twice.

owed by sellers increase by an additional $749 million.[485] In addition, CERS paid $2.7 billion of an average price well in excess of the MMCP, for short-term purchases that were shredded with the IOUs. Dr. Stern stated that he did not have the data necessary to calculate refunds for this category of costs, but these purchases were short-term and made in lieu of the ISO and PX. The California Parties respectfully request that the Commission apply the MMCP ultimately adopted in this proceeding to all of the short-term purchases made by CDWR to serve California's customers.

VIII. THE COMMISSION SHOULD PROVIDE A REMEDY FOR $182 MILLION IN UNJUST AND UNREASONABLE CHARGES THAT SELLERS OBTAINED THROUGH SALES OF GREATER THAN TWENTY-FOUR HOURS AND THROUGH EXCHANGE TRANSACTIONS

The evidence presented today by the California Parties shows that sellers engaged in a pervasive pattern of a wide variety of withholding strategies and market manipulation schemes. These behaviors led directly to a crisis of major proportions within the State: the largest purchasers became insolvent and the organized markets began to break down. The State, through the ISO and CERS, scrambled to buy power any way that it could. This crisis situation, with a desperate buyer, only increased the sellers' market power.

Sellers began, at times, to demand that power be purchased (whether by the ISO or by CERS) through sales of greater than twenty-four hours or through energy exchanges rather than through typical bids and sales to the ISO. Refusing to sell power during the needed hour unless the buyer also purchases power in other hours is a classic tying arrangement. Dr. Fox-Penner explains that "refusing to sell unless [the buyer] offers to make . . . purchases . . . with a minimum purchase period for the . . . sale," is simply one of a "variety of ways that supply can

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[485] *Id.* at 88:23.

be withdrawn from the RT market. . . ."[486] He also testifies that when sellers are profitably able to exercise market power through the various forms of withholding and the other market-manipulation strategies used by sellers in this case:

> There is no economic reason why [this market power] cannot be exercised over transactions lasting more than one day. Indeed, one well-known strategy for exercising market power is to force buyers to purchase bundles of commodities that include some of the good for which market power is strongest and some of another good for which there is less market power. By charging higher prices for the bundled good than buyers would pay for such goods purchased on a stand-alone basis, the seller earns some of the supra competitive rents from the sale of the bundled (also known as tied) good.[487]

Similarly, Dr. Fox-Penner demonstrates why energy exchange transactions should be subject to refund:

> There is no economic difference to a buyer between paying for a power purchase in dollars and paying for it in a commodity whose price is well-established in dollars in the marketplace. Indeed, there is little economic difference between denominating a transaction in units of power and denominating it in a foreign currency.
>
> * * *
>
> For transactions longer than a day (but shorter than the period during which market conditions change substantially through new entry), or transactions denominated in units other than dollars, there is no economic basis for excluding such transactions from mitigation.[488]

Mr. Green testifies on behalf of the California Parties that although the WSPP Agreement provides for a cap on exchange ratios of 1.5 to 1, sellers began to demand that CERS enter into

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[486] Fox-Penner Testimony, Exh. No. CA-1 at 28:14-20.

[487] *Id.* at 62-63.

[488] *Id.* at 63.

exchanges with exchange ratios of 2.5 to 1.[489] Dr. Berry similarly explains that exchanges entered into by both CERS and the ISO for necessary power reflect through their exchange rates exorbitant implicit prices that sellers such as Powerex joked about.[490]

The Commission previously held that sales arranged more than twenty-four hours in advance and sales for power sold in blocks of greater-than twenty-four hours, as well as exchange transactions, whether arranged through the ISO or through CERS, were not subject to refund. The evidence presented today by the California Parties demonstrates that these sales and transactions should be subject to refund. As the testimony of Dr. Fox-Penner shows, all of the California short-term markets are interrelated.[491] Similarly, the withholding strategies and market manipulation schemes outlined in his testimony are interrelated[492] and all serve to create a situation in which the ISO (or CERS) must scramble desperately and agree to almost anything in order to keep the power grid from collapsing. In that situation, sellers possessed the market power to demand that the ISO (or CERS) purchase power more than twenty-four hours in advance or in blocks of twenty-four hours or more or that sales take place through energy exchanges, rather than through the traditional ISO bid sales. The Commission should not rely on form over substance in a manner calculated to reward the sellers for their reckless exercise of market power.

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[489] Green Testimony, Exh. No. CA-13 at 7.

[490] Berry at 130-139; Exh. CA-44 (Powerex traders brag that their deals with CERS were "double the market.").

[491] *See* Fox-Penner Testimony, Exh. No. CA-1 at 32-38.

[492] Fox-Penner Testimony, Exh. No. CA-1 at 3.

Dr. Stern testifies that application of the current MMCP to this transaction greater than 24 hours and to exchange transactions would result in refunds to California consumers of approximately $156 million.[493] If the Commission adopts Staff's August 13, 2002 recommendation to revise the gas price proxy, refunds owed by sellers increase by $26 million. Consequently, the California Parties respectfully request that the Commission find that sales of greater than twenty-four hours and exchange transactions are subject to refund.

IX. CONCLUSION

The framers of the original Federal Power Act would not be surprised to have seen prices rise to five to ten times their ordinary levels due to market power and manipulation of power prices, for they had lived through periods in which the market power of utilities was not controlled by federal or state regulatory statutes. Perhaps due to this legislation and the Commission's success in enforcing it, no Commission since has been confronted with a market power and manipulation episode, and period of high prices and huge wealth transfers, anywhere near the size of the Western power crisis of 2000-2001.

With only 100 days to conduct discovery, the strategic recalcitrance of the targets of this inquiry, and mountains of data to sort through, the California Parties have unearthed far more than enough factual information to warrant Commission action. Even where the Commission finds individual facts or numbers open to interpretation, it is inconceivable that it can now ignore a pattern of unprecedented, unjust, and unreasonable prices and a pervasive, widespread, and amply documented pattern of behavior by many sellers that runs counter to market efficiency and transparency.

[493] *See* Stern Testimony, Exh. No. CA-3 at 84.

Armed with these facts, the Commission has an obligation under its enabling statute to assure that prices are just and reasonable and that sellers have not been unjustly enriched. Any other legal interpretation of its responsibilities, however elegantly crafted, makes a mockery of the Act itself. If the Federal Power Act was not enacted to prevent crises such as those experienced by California and the surrounding states, and to remedy the terrible effects when a crisis occurs, then what strength and validity can it possibly have?

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Dated: March 3, 2003

California Parties' Errata for

California Parties' Supplemental Evidence of Market Manipulation by Sellers, Proposed Findings of Fact, and Request for Refunds and Other Relief -- Non-Public Version

Page	Line	Correction
2	1st full paragraph	"This extraordinary increase in cost imposed great hardship on the State's citizens and businesses, crippled the State's two largest utilities, and took the State's budget from a multi-billion dollar surplus to a multi-billion dollar deficit, thereby robbing schools, police forces, and many other essential services of needed funds. Ultimately, it caused a life-threatening power crisis that sent the nation's most populous state into rolling blackouts." should be "This extraordinary increase in cost imposed great hardship on the State's economy, citizens and businesses, crippled the State's two largest utilities, and ultimately caused a life-threatening power crisis that sent the nation's most populous state into rolling blackouts."
8	bullet ¶, 9th line	"quality" should be "quantity"
8	bullet ¶, 13th line	"trader" should be "trades"
12	fn. 15	"at 61,507-08 n.40" should be "at 61,507-08"
16	fn. 28	"(D.C. Cir. 2001)." should be "(D.C. Cir. 2002)."
16	fn. 31	"at 155." should be "at 155-58."
17	1st full ¶, 3rd line	" 'return' " should be " 'refund' "

Page	Line	Correction
17	fn. 33	"at 186." should be "at 186-188."
23	fn. 43	"*Id.* ([Remedies ¶ 4])." should be "*Id.,* Appendix (Stipulation and Agreement), Remedies ¶ 4."
23	fn. 46	"Exh. No. CA-154." should be "Exh. No. CA-154 at 2."
24	fn. 52	"at 83:13-21." should be "at 84:13-21."
25	fn. 54	"at 15." should be "at 14; Hanser Appendices, Exh. No. CA-10 at 39-93." After sentence ending "turbine units." add "Reynolds Testimony, Exh. No. CA-5 at 13."
25	fn. 56	"at 28:11-29:2." should be "at 27:11-28:2."
25	fn. 57	"at 9:1-11." should be "at 6:7-8:10."
25	fn. 58	"at 5:5-8:5." should be "6:20-7:15; 23:1-26:20."
26	fn. 59	"at 6:9-21." should be "at 32:7-33:14."
26	fn. 60	"at 25-34." should be "at 32-39."
26	fn. 61	"at 84-96," should be "at 10-14, 84-96."
26	fn. 62	"at 84-86." should be "at 12, 84-86."
27	fn. 63	"at 10:6-12." should be "at 10:6-12, 84-86."
27	fn. 64	"at 11." should be "at 10-11, 14-15."
27	fn. 65	"at 52." should be "at 39-93."
28	fn. 69	add at end "Hanser Testimony, Exh. No. CA-9 at 7:18-8:2."
28	fn. 70	"at 22:7-18;" should be "at 21:7-18;"
29	bullet ¶ re: Mirant's Pittsburg 1 Unit	"October 18" should be "October 20"

Page	Line	Correction
31	fn. 88	insert at beginning: "*Id.* at 102." and "at 47-51." should be "at 19, 99."
32	last line of quoted conversation	"Maybe 3,400 dollars." should be "Maybe 3, 400 dollars."
32	fn. 89	delete "at 99."
32	fn. 90	"at 101:9-15." should be "at 16, 19, 21, 101-02."
32	fn. 91	"at 3-15." should be "at 5-26."
32	fn. 92	"Exh. No. CA-101." should be "Exh. No. CA-102 at 4."
33	fn. 95	after "at" insert "27:3-8,"
33	fn. 99	"at 37-39." should be "at 34-52."
34	fn. 103	"at 4-5" should be "at 5-7"
35	fn. 105	insert "32-33," after first "at"
35	fn. 106	"at 34:25-35:21." should be "34-39."
35	fn. 108	before "*Supplemental Report*" insert "Exh. No. CA-247," and "Exh. No. CA-247" on line 4 should be "Exh. No. CA-244"
37	fn. 115	"2.1.1.2," should be "2.1.1.3,"
38	Sec. C, 1st full ¶, 4th line	"in that Duke" should be "and that Duke"
39	fn. 122	"*Id.* at 62,565." should be "*June 19 Order* at 62,565."
39	last line	"The purposes of" should be "In"
40	1st line	"was" should be "uses"
40	2nd line	"of the use" should be "or the use"

Page	Line	Correction
41	fn. 127	"at 7:16-20." should be "at 7:16-20, 24 (Fig. 7)."
45	fn. 144	"at 5-31." should be "at 5-7."
48	1st full ¶, 2nd line	"scheduled" should be "schedules"
50	fn. 155	"Fox-Penner Appendices, Exh. No. CA-2 at 170-173." should be "Fox-Penner Testimony, Exh. No. CA-1 at 166-68; Fox-Penner Appendices, Exh. No. CA-2 at 170-73."
56	1st full ¶	Insert into first sentence "Aquila, Duke, and Dynegy." In the second sentence "PacifiCorp" should be "PPM".
56	fn. 176	"CA-134" should be "CA-134 at 17-19"
59	fn. 184	"at 144." should be "at 132."
59	fn. 185	"*Id.* Exhibit Nos. CA-111, CA-114, CA-115, CA-127, CA-129, CA-131, CA-22, CA-145, CA-93, CA-145, CA-74; CA-164." should be "*Id.* at 132-139 (and exhibits cited therein)."
60	fn. 189	"at 1-2." should be "at 1."
61	fn. 192	"at 147:9-17." should be "at 143:9-21."
65	fn. 197	"Exh. No. CA-112." should be "Exh. No. CA-112 at 1."
65	fn. 198	"at 24." should be "at 20."
65	fn. 200	"Exh. No. CA-34." should be "Exh. No. CA-334 at 1."
65	fn. 202	"at 3." should be "at 4."
66	fn. 203	"Exh. No. CA-1 at 161;" should be "Fox-Penner Testimony, Exh. No. CA-1 at 153;"

Page	Line	Correction
68	fn. 204	"Exh. No. CA-238." should be "Exh. No. CA-238 at 1."
69	fn. 205	"Exh. No. CA-235." should be "Exh. No. CA-325 at 6."
75	Proposed Finding of Fact	delete "Powerex and LADWP entered into a profit sharing arrangement to facilitate the joint exercise of market power."
77	1st full ¶, 5th line	insert "Montana Power, " before "Puget Sound"
79	fn. 251	"at 138-139." should be "at 102-05, 138-39."
79	fn. 252	at "103." should be "at 76-81."
83	fn. 265	"Exh. No. CA-204" should be "Exh. No. CA-204 at 15-43."
85	fn. 272	"at 10." should be "at 11."
86	6th line	insert a semi-colon after the word "California"
89	fn. 282	the citation to *International Telecommunications Satellite Orgs. v. Colino* prior to the parenthetical should be *International Telecommunications Satellite Organization v. Colino*, 1992 U.S. Dist. LEXIS 4887, *38-39 (D.D.C. 1992), *amended on other grounds*, 1992 U.S. Dist. LEXIS 8031 (D.D.C. 1992)
90	block quotation	"is declared" should be "is hereby declared"
90	fn. 283	"16 U.S.C." should be "15 U.S.C."
90	fn. 285	"at 61,012" should be "at 61,011-12"
91	fn. 288	"at 48:9-14." should be "at 48:10-14."
93	fn. 291	"at 61,521." should be "at 61,520-21."

Page	Line	Correction
93	Proposed Finding of Fact, 2nd line	"ISO" should be "IOUs" and "its" should be "their"
94	last ¶, 3rd line	after end of quotation insert "(Exh. No. CA-269 at 3)"
98	1st full ¶, 4th line	after "in 1999" insert "(*see* Exh. No. CA-248 at 2.)"
104	1st full ¶, 2nd line	"100" should be "IOU"
106	fn. 318	"at 14." should be "at 13."
107	fn. 322	"at 12." should be "at 10-11."
107	fn. 323	"at 12-13." should be "at 11-12."
108	fn. 324	"at 16." should be "at 15."
108	fn. 325	"at 17-20" should be "at 16-19."
108	fn. 326	"at 61,123 n.3." should be "at 61,349 n.3."
110	fn. 331	"Exh. Nos. CA-274-75, 279." should be "Exh. Nos. CA-274, 276, 279."
111	fn. 333	"6-7." should be "at 8-9."
111	last line	"at 222-64." should be "at 225-67."
112	fn. 334	"at 246." should be "at 249."
112	fn. 335	"at 260." should be "at 263."
112	fn. 336	"at 245." should be "at 248."
113	fn. 340	"at 265-289." should be "at 268-92."
115	fn. 342	"at 3 3:13-22." should be "at 3."
123	fn. 379	"Exh. No. CA-41 at 159-60." should be "Exh. No. CA-1 at 159-60."

Page	Line	Correction
126	1st full ¶, 5th-6th lines	delete "without being subject to cross-examination"
129	2nd line	"conversation" should be "conversations"
131	fn. 412	"Exh. No. CA-109 at 14-15" should be "Exh. No. CA-234 at 2-3"
136	2nd full ¶, 2nd line	"January 30, 2002," should be "January 30, 2003,"
142	fn. 445	"at 61." should be "at 63:15-17."
142	fn. 446	"at 6:5." should be "at 79:3-81:11."
143	fn. 447	"at 6:2." should be "at 81:8."
143	fn. 448	"at 6:3-6:4," should be "at 81:9-10."
145	fn. 454	"at 11:5-16." should be "at 37:34-38:6."
145	block quotation	"renders it impossible to isolate the economic impact" should be "renders it extraordinarily difficult, if not impossible, to isolate the economic impacts"
145	fn. 457	"at 10-11." should be "at 11:5-16."
145	fn. 458	"at 87-79." should be "at 68-77."
155	block quotation	"performed that function itself" should be "performed those functions"
155	fn. 479	"Exh. No. CAL-13 at 4:1-8." should be "Exh. No. CA-13 at 4:9-18."
156	fn. 480	"at 75." should be "at 76."
156	fn. 481	"at 6." should be "at 7."

Page	Line	Correction
156	fn. 482	"at 7." should be "at 104-05." and "'imported and purchased in real time'" should be "'imported and purchased bilaterally in real time"
157	fn. 483	"at 78-79." should be "at 177-78."
157	fn. 484	"at 6:20-24." should be "at 82:22."
158	fn. 485	"*Id.* at 88:23." should be "Stern Testimony, Exh. No. CA-3 at 89:15."
158	2nd line	"shredded" should be "scheduled"
159	fn. 486	"at 28:14-20." should be "at 30:10-15."
159	fn. 487	"at 62-63." should be "at 64-65."
159	3rd block quotation	"transactions longer" should be "transactions . . . longer"
159	fn. 488	"at 63." should be "at 65."
160	fn. 491	"at 32-38." should be "at 16-23."