

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company,
Complainant,

v.

Docket No. EL00-95-012

Sellers of Energy and Ancillary Services
Into Markets Operated by the California
Independent System Operator and the
California Power Exchange,

Respondents.

Investigation of Practices of the California
Independent System Operator and the
California Power Exchange

Docket No. EL00-98-000

California Independent System Operator Corporation

Docket No. RT01-85-000

Investigation of Wholesale Rates of Public Utility
Sellers Energy and Ancillary Services in the
Western Systems Coordinating Council

Docket No. EL01-68-000

AFFIDAVIT OF CARL PECHMAN
ON BEHALF OF
OF THE CALIFORNIA STATE ASSEMBLY

May 25, 2001

COUNTY OF SACRAMENTO)
) SS:
STATE OF CALIFORNIA)

1 I, Dr. Carl Pechman, being duly sworn, depose and state as follows. My business address is 180 7th Avenue, Suite 105, Santa Cruz, California 95062.

I. Qualifications

2 I am the President of Power Economics, Inc., an economics consulting firm which provides expert analysis and testimony on subjects related to the economics of electricity. Prior to founding Power Economics, I was a Director and Principal of the Law and Economics Consulting Group (LECG). At LECG I provided testimony and analysis on subjects relating to transmission pricing, cost unbundling, anti-competitive practices, electric system reliability, and power contract disputes.

3 Prior to joining LECG, I served as an economist with the New York Department of Public Service (NYDPS), the staff arm of the New York Public Service Commission (NYPSC). My tenure at the NYDPS was from 1979 through 1997. At the NYDPS I was responsible for the economic analysis of electric utility costs, operation, and planning. At the NYDPS, I testified in rate cases, energy planning proceedings and siting cases for electric generation and transmission and competitive gas transmission pipelines. I was the staff economist assigned to the audit of the New York Power Pool and served as the co-lead of New York Public Service Commission activities to create an independent system operator in New York.

4 I hold a Ph.D. in Resource Economics from Cornell University in Ithaca, New York. My dissertation, which was published as Regulating Power: The Economics of Electricity in the Information Age (Kluwer Academic Publishers, 1993), evaluated impediments to the creation of competitive markets for electricity. My analysis identified market power as an impediment to competition and demonstrated how market power could result from power system design.

II. Purposes of Affidavit

5 The purposes of my affidavit are to:

1. Describe an economic framework for assessing the design of alternative market mitigation proposals;
2. Demonstrate that the Federal Energy Regulatory Commission's ("Commission") price mitigation plan embodied in the April 26th Order is an unworkable and capricious experiment in market design;
3. Explain why cost-based rates are the only mitigation mechanism available that eliminates the incentive for strategic withdrawal of generation; and
4. Note specific concerns with the Commission's proposal.

III. Assessing Mitigation Proposals

A. The Commission's Balancing of Interests is Inadequate

6 The purpose of a market mitigation plan is to mitigate the consequences of the current market operation. The word mitigate is defined in the Shorter Oxford English Dictionary in a variety of ways, all of which have a similar theme:

- To reduce the severity of;
- To alleviate;
- To render less violent.

7 In the case of the California electric market, mitigation is required to alleviate the economic damage that "unjust and unreasonable" prices are inflicting on the citizens and

economy of the state. Mitigation must focus on alleviating the short-run harm caused by the current level of prices and unreliability of the electric system in California.

8 Mitigation by its very nature involves second-best pricing. It does not seek perfection, it seeks movement in a particular direction. The Commission is placing higher priority on long term solutions, if that is what they are, ahead of the immediate need to discipline this dysfunctional market that is extracting unreasonable prices. To the extent the Commission believes a price signal is needed or warranted, that price signal has long since been sent and more – at the expense of billions of dollars to California.

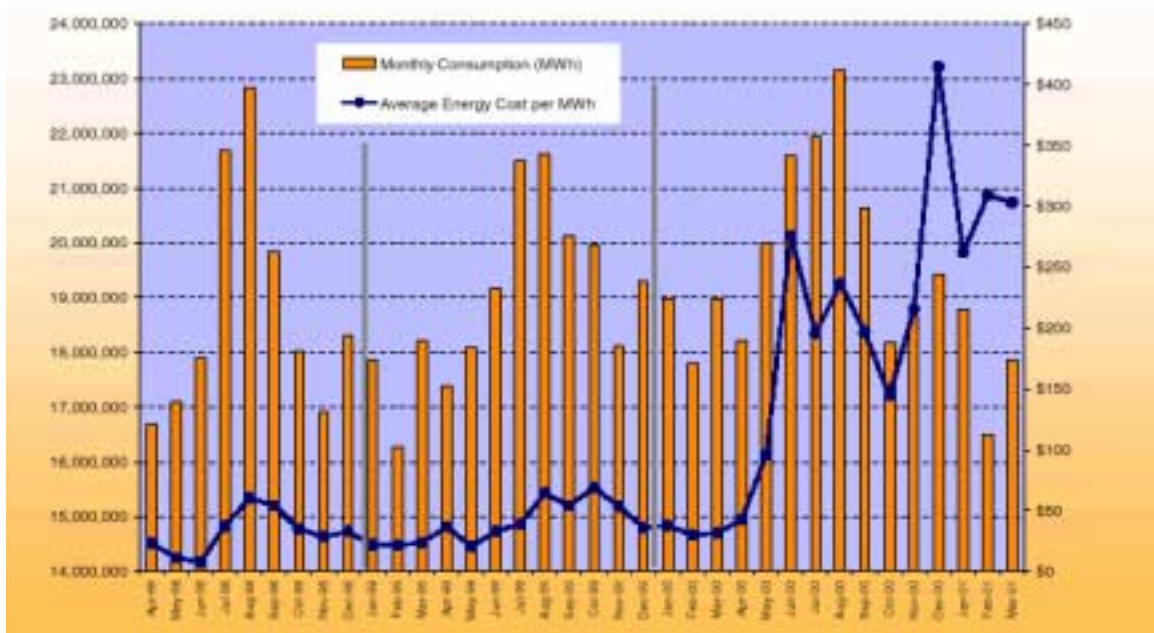
9 The Commission, in adopting its mitigation plan, sought to “balance the interests of suppliers and consumers of energy in California's wholesale markets to mitigate the dysfunctional market without delaying needed investment in generation, transmission, and demand response mechanisms.” (April, 26 Order, pg. 8) The Commission does not articulate the method of balancing interests, and does not provide any explanation of how interests were in fact balanced.

10 The Commission recognizes that it has an obligation to protect customers. “Under the Federal Power Act, the Commission must protect both consumers and investors.” (April 26 Order, pg. 6). However, the Commission in its order has not evaluated who is in need of protection and the level of protection required. Presumably, because the Commission has promulgated a market mitigation plan, it recognizes that customers need protection. However, the Commission has not articulated what customers must be protected from, nor does the Commission define a reasonable level of customer protection.

11 The appropriate emphasis in the design of a market mitigation system is on customer protection. A period of price stability and transparency with respect to individual distribution utilities and generators is desirable. The financial shock to the California economy is real and

growing daily. The economic impact has two components: lack of reliability and exorbitant prices.

12 In a recent paper, Dr. Scheffrin, the California Independent System Operator's (CAISO) Director of Market Analysis, has reviewed the dynamics of the California electricity crisis. She attributes the dramatic price increases demonstrated in the following figure, to "tight supply conditions and inelastic demand [that] allowed most significant suppliers to exercise market power to inflate prices even in low-load hours."¹ At the same time that the price was increasing, there was a dramatic deterioration in the reliability of the system, exemplified by the number of alerts, warnings and emergencies. The state's electric system operators found that the only way to stall the further deterioration of reliability was to implement a regime of rotating blackouts.



¹ Scheffrin, A. "California Power Crisis: Viewpoint of the System Operator." Presented at the World Bank Group Infrastructure Forum, May 9, 2001, pp 5-6.

13 The Commission contends that “the mitigation plan must strike a balance between constraining price and encouraging more supply.” It provides no evidence or analysis to support the need for prices of the sort experienced since mid-2000. For example, the Commission in its decision does not explain why the balance must be tipped in favor of encouraging more supply even though it recognizes that “California Energy Commission’s current status report indicating that new generation totaling 4,168 MW will be on line by the end of August 2001 and there could be as much as 6,879 MW on line for the summer of 2002.” (April 26 Order, pg. 25) Generators do not require monopoly level prices based upon market power to have a sufficient price signal incentive for investment in generation. Prices based upon market power are redistributive, and reduce allocative (and perhaps even long-run dynamic) efficiency.

14 Not only do prices based upon market power not enhance efficiency, they cause inefficient waste in both static and dynamic contexts. In a static context, prices above the competitive level cause deadweight losses in that the harm to consumers necessarily outweighs the gain to the suppliers exercising the market power. In a dynamic context, prices based on market power discourage additional investment by the existing generators who are the present beneficiaries of market power. The present prices are higher and the profits greater than any competitive level because supply is more scarce than it would be in a competitive market. The incentive for existing generators is to maintain the scarcity that is so profitable. The higher the price, the greater the value of the scarcity and of whatever is causing the scarcity.

15 The Commission should realize that an amount of building that is only enough to maintain the present level of scarcity could indicate conscious maintenance of market power, not an inadequate price signal. The Commission should carefully study the barriers to entry for new generating facilities by electric power providers and what is preventing the amount of generation additions from being more than it is. It is worth further investigation of the role of electric generators in California’s siting process where existing generators and other

generators fairly far along in the approval process used the process to slow down or block progress of new generation proposals.

16 At no point does the Commission or its Staff identify any deficiency in current incentives to expand supply. Neither the Commission nor its Staff addressed whether new power plants under development in the state will be sufficient to alleviate the current capacity shortfall. Nor has the Commission addressed whether its concerns about encouraging supply can be partially alleviated by the creation of the California Power Authority (SB 6X), and the willingness of the state to construct capacity. Furthermore, the Commission offers no evidence that it has considered the effects on needed supply of the extraordinary droughts in the Pacific Northwest, expanded regional transmission cooperation, and new generation being built in neighboring states. Would the Commission have California build fossil fuel plants in the state and wipe out the benefits of power sharing and cooperation with the Northwest? Or would the Commission have so many power plants built in California, so as to reduce the benefits of a Regional Transmission Organization?

17 The Staff Report (pg. 14) states “any market power mitigation plan for the long term should address the siting or financial barriers to entry of new generation and transmission investment.” Neither the Staff Report nor the April 26 Order adopting the current plan addresses either of these factors.

18 In fact, when developing its price mitigation plan the Commission ignores the very evidence that it cites on California’s success at siting and building power plants as its rationale for limiting its mitigation plan to one year.

B. Attributes for Assessing Mitigation Proposals

19 Mitigation by its very nature must address short-run concerns. The relevant issue is whether the market is working now to produce just and reasonable rates, not how it might

work in the future. A critical attribute is the distinction between scarcity rents and wealth transfers that result from the exercise of market power.

20 In a competitive market, a good is said to be scarce because it is desirable, exists in a limited amount, and has a cost to produce. No matter how desirable the good may be, competitive forces will ensure that the long run price is not greater than the cost. In an efficient competitive market the price of any good tends to equal the short-run average total cost (ATC) of the least efficient firm (or generator) in the market. Over time the price will fluctuate around this long run average as a signal to suppliers to expand or to contract supply. At the same time, in the absence of barriers to entry, new and more efficient firms enter the market and drive out the least efficient firms. This replacing of the least efficient firms by the more efficient firms causes the long run competitive market price to trend downward.

21 A good can be said to be scarce in that there is not more of it, produced without cost, than consumers wish to consume. However, it is important to remember that in a competitive market, supply adjusts to make the price equal to production cost unless barriers to entry prevent the supply mechanism from working. A monopolist raises prices above the competitive level by reducing the amount produced and, at the same time, erecting barriers to entry that prevent new firms (generators) from expanding supply and driving price back to the competitive level. The exercise of market power is a futile one in the absence of barriers to entry because the high prices would only cause new firms to expand supply and possibly to displace the firms that were reducing their supply and raising prices.

22 In California, some of the barriers to entry appear to be caused by rules and regulations and could be said to cause increased scarcity while not being the result of the exercise of market power. Scarcity has been aggravated by independent generators themselves, by blocking or slowing down approval of new plants by competitors. In addition to the increased scarcity caused by these barriers, the exercise of market power further limits the amount of electricity supplied, causing a further increase in the degree of scarcity and in

the market price. Thus, market price reflects the sum of the impact of scarcity and the impact of market power. Each factor separately, additively contributes to high prices. The objective of market mitigation is to suppress the impact of market power on price and correspondingly force prices toward their competitive level.

23 It is economically efficient to reflect the value of scarcity in wholesale prices only if this scarcity has not been caused by the exercise of market power and if barriers to entry will not prevent an expansion of supply. Higher prices will signal a need for increase in supply in the long run, and price rationing and conservation in the short-run. The question of balance is whether the social costs of the price signal exceed the value of the price signal. This value will be much reduced if barriers to entry prevent the price signal from inducing additional supply. It should also be noted that much of the perceived social cost of the higher prices to consumers is a consequence of the absence of a normal demand response in the current market structure. The absence of a demand response mechanism means that consumers have little or no way to protect themselves from the high prices. Also, the absence of a demand response mechanism makes the short run prices much higher than they would be otherwise and the exercise of market power much more profitable, as discussed below. California has recognized the importance of a demand response and is actively pursuing the development of a broad array of mechanisms to implement a demand response. The design of mitigation will determine the wealth transfer that will accompany the re-alignment of supply and demand.

24 Mitigation proposals have a number of attributes that will determine both the ability to protect customers and the balance between customers and suppliers. Attributes of a mitigation plan include: the threshold of mitigation; the mechanism by which the mitigation operates; the nature of the price signal produced by the mitigation; the ability to game the mechanism; the impact on price; impact on reliability; geographic scope and duration.

25 The mitigation threshold determines when the mitigation is in effect. Ideally the threshold is related to a measure of market power. Thresholds can be based upon measures of market power, the level of price or system conditions.

26 The mitigation mechanism is the way that mitigation operates. Mitigation is either carried out in real-time or through retroactive price adjustment and refund. Mitigation in real time modifies the operation of a uniform price or discriminative auction through the use of offer or price caps. Ultimately, the Commission must determine how long a mitigation plan must remain in effect. The mitigation threshold can play an important role in defining the duration of the mitigation procedures.

27 The purpose of mitigation is to affect both market price and reliability. Ultimately the test of a mitigation system is whether the market mechanism provides a stable framework in which reasonable prices can be charged. The mitigation plan provides incentives for generators to participate or withdraw from the market. It will determine whether a generator will profit from strategic withdrawals of generation or raising offered prices above competitive levels. The level of supply at any time has a direct effect on both price and reliability. The post mitigation price signal will have an impact on the price signal sent to both supply and demand. This will affect the feasibility of demand-response programs and whether new generators are attracted to build within the mitigated market.

28 Market mitigation must define the market that is being mitigated. One critical component of defining electric markets is its geographic scope. In the case of California, this breaks down to two issues: whether the geographic scope extends beyond California's borders, and whether the mitigation plan is robust enough to recognize the separation of the intra-California market itself when there is transmission congestion. A second component of defining power markets are the products within the market that are being implemented. For example, one approach to mitigation might be to focus exclusively on real time markets. An alternative approach, would be to include bilateral markets as well.

IV. The Commission’s Plan is an Unworkable and Capricious Experiment in Market Design

29 The Commission has issued a mitigation plan that has five key features:

1. The determination of the mitigation threshold;
2. Pricing during periods of mitigation;
3. Incentives for customers to enter into long-term contracts;
4. Geographic scope; and
5. Duration.

30 The remainder of this section explains why the Commission’s plan is unworkable, resulting in a continuation of the current level of exorbitant prices and a level of unreliability that is exacerbated by economic withholding of generation.

A. Threshold

1. THE COMMISSION’S THRESHOLD FOR MARKET MITIGATION IS CAPRICIOUS

31 In its adoption of the market mitigation plan, the Commission establishes a new standard for determining when a market is competitive. This standard for assessing market power lacks foundation.

[T]he Commission will require price mitigation for all generators in California, including non-public utility generators, with available capacity during periods of reserve deficiency, defined as emergency situations beginning at stage 1 (i.e., when reserves are 7.5 percent or less). (April 26 Order, pg. 14)

33 At page 19 of the Order, it states; “[t]hese conditions, although applied for purposes of reliability, nevertheless can serve as a standard by which the market should have enough supply to yield a competitive result.”

34 It is prudent when establishing new market power criteria to test their effectiveness as a mitigation threshold. The Market Surveillance Committee (MSC) of the ISO performed such an analysis of Staff's proposal to use Stage 3 as the criterion for initiating mitigation. They found¹ that, "none of the market power exercised during the summer and autumn of 2000 would be mitigated under the Staff's recommended plan, because the first Stage 3 did not occur until December 7, 2000. This implies that almost \$6 billion of the \$8 billion of overpayment during 2000 due to the exercise of market power would not be mitigated." The Commission provides no evidence of the potential effectiveness of the mitigation threshold that it has adopted.

35 The standard adopted by the Commission provides more mitigation than the standard recommended by Staff. However, the Commission has not evaluated whether or not the alleged instances of market power abuse would in fact have been mitigated under its Order. As such, the Commission has imposed a threshold without explaining, and apparently without evaluating, any information on the potential impact of the threshold. There is no basis for the Commission's conclusion that "These conditions, although applied for purposes of reliability, nevertheless can serve as a standard by which the market should have enough supply to yield a competitive result." (April 26 Order, pg. 19)

36 The Stage 1 threshold is arbitrary. For example, there are system states, prior to a Stage 1 emergency, that indicate that the system is experiencing deteriorated reliability. The CAISO has a procedure for declaring a "No Touch Day." A No Touch Day is a precautionary restriction, issued by the ISO to limit routine work or maintenance in an effort to preclude an avoidable loss of resources. During a No Touch Day, no work or adjustments will be performed to the power transmission system, system generation, or associated

¹ Wolak, F. and Nordhaus, R., "Comments on 'Staff Recommendation on Prospective Market Monitoring and Mitigation for the California Wholesale Electricity Market'", Market Surveillance Committee (MSC) of the California Independent System Operator (ISO), March 22, 2001, pp 10-11.

computer control systems without the express permission of the ISO. The Commission does not assess the appropriate point on the reliability continuum to serve as the threshold for mitigation.

37 The Commission's threshold is insufficient to control market power or to provide market stability. The electric market in California is now constantly on the brink of a state of emergency. The Commission's mitigation plan increases uncertainty over price to generators and customers alike. Production and unit commitment decisions are made on a day-ahead basis. Generators making these decisions will be uncertain about the price that they will be paid, because it will depend upon the reliability of the system. The emphasis of the Commission's mitigation plan needs to be on removing the exercise of market power and uncertainty in the market, not exacerbating it.

2. THE COMMISSION'S STANDARD FOR MITIGATION DOES NOT REFLECT THE IMPORTANCE OF TRANSMISSION CONSTRAINTS IN A GENERATOR'S ABILITY TO EXERCISE MARKET POWER

38 The criteria for market power mitigation adopted in the Commission Order is on a state-wide basis. These criteria do not reflect the fact that the exercise of market power is often accomplished in a more narrow geographic area.

39 A well-recognized fundamental of competitive power markets is that the potential for exploiting market power increases when transmission lines are constrained. The effect of a transmission constraint is to create electrical islands, in which the marginal unit supplying load within the constrained area must be provided by a generator within that area. These electrical islands are also called load pockets.

40 The early design of the California market recognized the importance of transmission constraints. Reliability Must Run (RMR) Units refers to conditions in which a local area transmission grid may not operate reliably solely because of insufficient generation in service

with the local area. RMR contracts were an effort to mitigate market power by local generators.

41 The Commission has also recognized the importance of local reliability and transmission concerns in other power markets. For example, in New York the Commission has established a market mitigation plan for New York City. New York City is a classic load pocket. Transmission capacity is often constrained, enabling in-city generating units to exercise market power. The current mitigation plan is based upon an evaluation of price differentials. Price mitigation is implemented when the price spread at Indian Point 2 bus to a divested unit within the City exceeds 105 %. Indian Point is North of New York City, on the other side of a major transmission interface.¹

42 It is likely that there will be times when the state will not be in an emergency situation, yet transmission constraints will be binding, creating load pockets. The Commission's mitigation plan would not mitigate any market power exercised within a load pocket.

3. THE COMMISSION DOES NOT HAVE WELL-ESTABLISHED CRITERIA FOR DETERMINING GENERATOR MARKET POWER OR THE NEED FOR MITIGATION

43 The Commission has evaluated market power for three reasons: to allow market based rate authority, to allow mergers and to assess when mitigation is appropriate. Although the Commission has continued to use the hub-and-spoke market power analysis as recently as May 18 in *Duke Energy Mojave, LLC*, Docket No. ER01-1619, it is clear that the market is not competitive, or no price mitigation would be necessary. This traditional market power analysis is not based on a "delivered-price" model as is used in the evaluation of electric utility mergers. Historically the Commission has refused the use of the more stringent merger

¹ Federal Energy Regulatory Commission, "Order Rejecting Market Power Mitigation Measures," Docket Nos. EL 01-45-000 and ER01-1385-000, issued May 16, 2001, Pg. 2.

analysis in reviewing applications for market-based rates. Clearly the harm stemming from the extension of market-based rate authority in the absence of a truly competitive market is in the long term as harmful to the market as the granting of a merger application. Although the Commission has stated that more stringent market analysis is necessary in the context of a merger because a merger is not easily undone once consummated, the harm to the market and consumers in granting market-based rates to generators with market power is significant and long lasting.

B. Pricing

44 The “new” auction proposed by the Commission is really a disguised soft-cap auction. Instead of using a fixed cap of \$150/MWh to divide the auction between the uniform and discriminative components, the new auction will use the most expensive proxy price (estimate of the true marginal cost), which will be determined primarily by the spot price of natural gas. There is no economic rationale, evidence or analysis provided to show why this new soft-cap auction will work any better than the current soft-cap auction.

1. THE PROXY BID

45 The Commission’s mitigation plan provides a flexible cap on bidding – a soft cap. The plan allows a generator to choose the cost basis of its price during mitigated periods. The generator can choose to be paid either a proxy cost or a bid based upon its own cost.

46 The proxy bid is the sum of a proxy energy cost plus some adders. The proxy energy cost used in the bid is based upon the unit heat rate for each generating unit times a proxy gas price which is the average of the daily prices published in Gas Daily for all California delivery points. The Commission formula will provide a \$ 2 adder for operation and maintenance plus an adder based on emissions credit costs from Cantor Fitzgerald Environmental Brokerage Services data and the emissions rate for the unit.

47 The Commission price mitigation formula is problematic for a variety of reasons. The elements of the formula are not fully defined. The Commission does not define the units of the operation and maintenance adder. Is it \$ 2 per generator per year or \$ 2 per kwh or MWh? The Order does not say. In addition, the adder for emission costs overstates the generators' actual cost because the state has capped the price of credits for electric generators at a price typically below the market rate. The Commission does not specify the method for determining heat rates. Is the method based upon unit specific heat rate tests, or simply based upon the generator owner's assertion? What provision will be made for auditing heat rates? Are heat rates to be measured for an average level of output, for the maximum level of output or as a heat rate curve? The answers to these and other questions will have a profound impact on the actual level of the proxy bid and therefore the mitigated prices. Failure to specify the heat rate to be used permits generators to choose their unit's heat rate, enabling a new form of gaming in the context of market mitigation.

48 The use of gas prices based on a geographic average is also problematic. To the extent that there are differences in the price of gas in different parts of California, the generators in areas with lower cost gas will make a windfall with this formula, whereas customers in the high cost areas of the state will chose to bid based upon their actual costs. The use of the spot gas price will in many instances overstate the actual cost of service because many generators buy gas in the forward markets or hedge their spot-market exposure. The Commission should not assume that generators purchase gas unprotected in the spot market, but should assume that they hedge. Neither the proxy gas price nor the geographic average are helpful indicators of fuel cost for the bulk of California's independent generators. For example, in order to obtain financing for the acquisition of the utilities' divested generating plants, buyers are generally required to secure long term fuel supply contracts. These contracts were obtained at a time when natural gas prices were only a fraction of today's spot prices.

2. PROXY BID OPT OUT

49 If a generator believes that the proxy bid method yields a bid lower than its cost, then the generator can submit a bid that is higher than the proxy bid. If “the proxy bid [*sic*] calculated by the method is lower than the generator’s actual marginal costs,” then “the generator may submit a bid [*sic*] greater than that calculated through the proxy.”¹ The Commission’s mitigation plan pricing formula ensures that generators are paid the higher of their cost or the proxy bid.

50 Offers that are accepted above the market clearing price based on the generator’s stated “true costs” will not set the market price for other generators. Hence, this is a discriminative auction, and the structure of the auction is essentially the same as the abandoned soft-cap auction.

51 It is prudent when protecting customers, to design a mitigation system that acknowledges that high prices can and will likely be experienced in hours beyond the emergency conditions. In a hybrid market, dividing a uniform and a discriminative auction with a soft cap, suppliers face a discrete choice whenever they think that high prices are possible. Generators can either settle for a “low” price in the uniform price auction, or try to get the “high” price by submitting an offer above the soft cap. Consequently, more capacity with high offers is submitted into a soft-cap market than into a uniform price auction. For example, the Department of Market Analysis of the CAISO reported that over two-thirds of real time energy was submitted above the soft cap in January, 2001².

¹ Note that one makes a “bid” to buy and an “offer” to sell in an auction. When loads are represented more effectively in auctions, this distinction in terminology will become important.

² Department of Market Analysis, California Independent System Operator, “Report on Real Time Supply Costs Above Single Price Auction Threshold: December 8, 2000 – January 31, 2001” February 28, 2001, pg. 8.

52 In laboratory economics experiments conducted by Cornell University¹ using subjects drawn from student business majors, power industry professionals, and regulators, the soft cap auction was compared both to a uniform price auction and to a discriminative auction. Results were consistent across all groups, which uniformly showed sophisticated strategic behavior. Subjects each owned generators and earned salient cash profits from operating them in the various markets tested. The results showed that although the uniform price auction produced more price spikes, average prices were lower than in either of the other auction designs. Further, the highest average prices were observed in the soft cap market. Generators consistently withdrew capacity to match the forecasted load so that offered generation tracked load and kept prices high even in periods of relatively low load. In the soft cap market most generators submitted offers prices above the soft cap using it as a focal point.

53 The April 26 Plan does have the advantage of removing the \$ 150 focal point, but generators will become quite good at forecasting price. This is because the offers into the Commission's uniform price auction are essentially static over time, so price becomes a stable function of load. Thus, given forecasted load, sophisticated generators will again be able to withdraw capacity, predict price based on forecasted load, and submit "cost" based offers above their own predicted price in the market which will form a new focal point. The putative excess maintenance requirements will be used to justify withdrawing capacity and higher costs. Out of state suppliers will, of course, have no need to justify such withdrawals. Again, both in the laboratory and in actual markets, generators have shown themselves to be sophisticated market participants.

¹ Mount, T.D., Schulze, W.D., Thomas, R. J. and Zimmerman, R. D., "Testing the performance of uniform price and discriminative auctions." Paper to be presented at the Rutgers Center for Research in Regulated Industries, Fourteenth Annual Western Conference: Advanced Workshop in Regulation and Competition, Competitive Change in Network Industries, San Diego, Ca. June, 2001.

54 One unintended consequence of the soft cap proposal is that it hampers the effectiveness of a demand-response to reduce price. When substantial capacity is submitted at a high offer in a hybrid auction, the effects of conservation by loads is muted. It is much harder to mitigate high prices in a soft-cap market than it is in a conventional uniform price auction, because the distribution of offers shifts toward the anticipated market clearing price. Hence, the current soft-cap market the Commission has imposed will likely make the financial problems for California worse than they would have been using a uniform price auction. Since the new market mitigation plan has the same type of hybrid structure as the existing soft-cap market, these financial problems are likely to continue unabated.

3. CONFIDENTIALITY OF BIDS

55 The Commission seeks to maintain the confidentiality of bids for a fixed time period (April 24 Order, pg.24). It maintains that this promotes competition. However, the exact opposite result has been experienced in numerous auctions. For example, the New York Stock Exchange posts bids and offers in real time so that a seller will have the opportunity to undercut a posted offer. Competitive markets require perfect information. Sellers must provide information that allows them to undercut each other. Maintaining the confidentiality of the bid inhibits this market mechanism.

C. Incentives for Bilateral Contracts

56 The Commission has explicitly protected generators through the imposition of a penalty designed to encourage energy buyers to enter into bilateral contracts. The stated rationale is that the “price mitigation plan adopted ... should not create incentives for buyers to avoid bilateral agreements.” To encourage energy buyers to enter bilateral contracts, the Commission will impose a penalty of up to “\$100/MWh if they have over 5 percent of their load served in the real-time market. Under this price mitigation plan, a buyer that fails to negotiate bilateral contracts and attempts to rely on mitigated prices in the real-time market

will face the prospect of paying the highest bid price or mitigated marginal cost price plus the \$100/MWh penalty.” (April 26 Order, pg 20)

57 The imposition of this penalty will have two effects. Because the rule is not well defined, and buyers face the prospect of a penalty, the rule increases market uncertainty. The FERC does not differentiate whether the penalty will be enforced in mitigated versus non-mitigated periods. To the extent that the rule is enforced, the impact will likely be to increase day-ahead prices in non-mitigated hours. The reason is simple: the Commission is establishing an administrative price differential between real time and bilateral markets.

58 Energy buyers in the State of California do not need an incentive to enter into long term contracts. In reaching its decision, the Commission has not evaluated the reasons why customers are not entering into bilateral contracts. Nor has it evaluated any of the implications of the proposed penalty on the price of power. What the Commission views as an incentive, is simply another penalty imposed upon California customers.

D. Duration

59 At pg. 25 of the April 26 Order, the Commission indicates that it will limit the period for the mitigation plan to one year. It does so because of California’s success at adding new power plants, and the expectation of the development of a demand-side response. The Commission forecasts success of the market, yet has not protected customers by developing or utilizing a yardstick to determine whether the market will in fact be competitive at the end of one year. The Commission should use the next year to examine anti-competitive activity in the market to determine the extent to which continued mitigation is necessary and to examine other methods to facilitate true competition in the California market or a return to cost of service rates.

E. Geographic scope

60 The Commission recognizes that western markets are interconnected. “Because western markets are interconnected, the Commission recognizes that regional solutions are a necessary part of any long term restructuring of the western marketplace.” (April 26 Order, pg 20) The Commission is requiring the CAISO and the state’s three large investor-owned utilities to file an RTO proposal by June 1, and has tied the continuance of price mitigation to these filings. The Commission however, provides no guidance for how or even whether the RTO proposal will require some form of market mitigation.

61 The Commission’s specification of the geographic scope of the market mitigation is wholly inadequate. By failing to deal with the issue of wealth transfers from California to out-of-state generators, the FERC has ignored a critical element of the current economic crisis that plagues California. In fact, the Commission’s contradictory directions will impede development of an efficient western market. On the one hand, the Commission is pressuring California to develop new supply irrespective of its own need, and on the other, the Commission is pressing for regionalization. The Commission is pressing for a surplus of new expensive generation at the expense of improved regional sharing of low cost generation.

V. Cost Based Rates Are the Only Mitigation Mechanism Available That Eliminates the Incentive for Strategic Withdrawal of Generation.

62 The one way to unambiguously meet the dual objectives of mitigation proposal: is to reduce prices and improve reliability through replacing market based rates with cost based rates.

63 One way that generators exercise market power is through the strategic withdrawal of generation. For example, in a uniform price auction, if a generator owns high, medium, and low cost generators, it can withhold its medium cost generators and let the high cost units

set the price and make a ton of money on the low cost units. From a generator's perspective, this is a perfectly rational thing to do. The effect on the market however, is to increase prices.

64 To improve reliability, a mitigation scheme needs some way of forcing all units into the market. This can be accomplished by creating a price regime that mitigates the generator's incentive to withhold capacity. Cost of service regulation mitigates the incentive to withdraw capacity. Generators are paid based upon actual generation. The payment to the generator is analogous to payments made under PURPA contracts. Generators get paid a fixed price for their output. The problem for regulatory commissions was how to reduce the level of generation to minimize overpayments. The point is that the generators responded to a fixed price regime in a manner in which they had an incentive to supply energy, not to withhold it.

65 One feature of cost of service regulation is that it provides a long-term administered relationship between the generator and the consumer. Under cost-based regulation generators would recover their prudently incurred costs and would be provided an opportunity to earn a given rate of return. It is important to set cost-based rates at a level that allows generators to earn a reasonable profit. If the expected return on capital is adequate, then generators will build additional generation. Market price signals would be created through economic dispatch, where generators are paid their incurred costs.

VI. Specific Concerns with the Commission's Proposal

A. Concerns with the April 26 Proposal

66 Mitigation is the act of alleviating. As stated above, it is likely that the Commission's current market mitigation plan will actually make matters worse for California's electric consumers. Modifications to the Commission's plan would be required to move it in the

direction of reducing prices and mitigating adverse effects on consumers. Such modifications could include:

1. The soft cap provisions of the Commission's plan must be eliminated;
2. All hours should be mitigated;
3. The price of natural gas used in the proxy cost calculation, must be either the lower of actual gas prices or the spot market price of gas;
4. The asymmetric scheduling penalties placed on load should be eliminated;
5. The \$ 2 operations and maintenance adder should be eliminated, until the factual basis and need for the adder have been established;
6. Generator emission costs should be either the lower of the Cantor Fitzgerald market cost of NOx allowances or the actual cost incurred by the generator owner;
7. All economic information in the market, such as bids and offers need to be made public;
8. The mitigation plan should cover all generators selling in the California market; and
9. The sunset of mitigation should be dependent upon market conditions and success in achieving just and reasonable prices and not an arbitrary fixed time horizon.

67 Even if the Commission made all of these improvements to its mitigation plan, it would still face the challenge of providing incentives so that generators would not withdraw their output to increase the market clearing price. There are two aspects to this problem. The first is that generators would still have an incentive to withdraw generation to increase the market clearing price. The second is that the revised mitigation plan would create an asymmetry in regional prices.

68 The Commission has several alternatives for providing an incentive for generators to fully participate in the market, and not withdraw power. One alternative is to establish generation performance targets. If the generator fails to achieve its performance target it would incur a penalty for the amount of generation shortfall. For example, in the event of a generation shortfall, generators would pay a penalty of 120% of the average price of power (estimated for the period of the shortfall) for the number of hours of the shortfall. The performance targets should be based upon a benchmark of similar generation. An alternative to performance targets is a vigorous program of monitoring outages with substantial fines for the intentional withdrawal of generation.

69 The question of asymmetric prices in the Western region is problematic. The problem exists because a generator may have the option of selling either into the California market or into an unmitigated market. It is possible to have adjacent markets with different levels of system reliability. This situation is a departure from the culture of sharing resources that existed in power systems prior to deregulation.

B. Future regulatory actions

70 Fixing the “dysfunctional market” in California will be an on-going process. No mitigation plan will result in a “first best” market. That is not the objective of mitigation. The objective is to reduce the economic harm that results from the current market conditions.

77 The Commission is charting new ground. Its decisions can have the effect of reducing market prices, or as in the case of the December 15 mitigation plan – increasing prices. As such, it is prudent to establish a regulatory process designed to evaluate the state of the market and the effectiveness of mitigation plans. Such a process can evaluate impediments to long-term contracts and assess mechanisms for removing those impediments.

Respectfully submitted,

By: _____

Carl Pechman

SUBSCRIBED and SWORN to before me, a Notary Public, this 25th day of May, 2000.

Notary Public

My Commission expires:
