UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company	)	
v.	)	Docket Nos. EL00-95-012
Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent System Operator and the California Power Exchange	)	*et al.*

REPLY COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION ON MARKET POWER MONITORING AND MITIGATION MEASURES

I. INTRODUCTION

At the technical conference hosted by Commission staff on January 23, 2001, the Department of Market Analysis ("DMA") of the California Independent System Operator Corporation ("CAISO" or "ISO") presented a "Draft Proposal – Market Power Mitigation Plan." Several other parties also presented comments or proposals concerning market monitoring and market power mitigation. At the close of the conference, Commission staff invited participants to submit additional comments by February 6, and to submit any responses to such comments one week thereafter.

On February 6, 2001, the ISO submitted its Comments on Market Power Monitoring and Mitigation Measures in the above-captioned docket ("February 6 Comments"). The ISO's February 6 Comments include a revised "Draft Proposal – Market Power Mitigation Plan." A number of other parties also submitted comments addressing market monitoring and market power mitigation in this proceeding on

February 6 and 7. The comments submitted by other parties include comments on the ISO's proposed market power mitigation plan as well as more general comments and alternative proposals for market monitoring and market power mitigation. The ISO now submits the following responses to those comments.[1]

II. COMMENTS ON THE ISO'S MARKET POWER MITIGATION PLAN

As explained in the ISO's February 6 Comments, energy costs in California have soared to unprecedented levels in the last several months. The ISO's analyses indicate that these high prices are directly linked to the ability of certain suppliers in the California electricity markets to exercise market power.[2] Moreover, the mitigation measures currently in place, including the $150 breakpoint or "soft cap" mandated by the Commission's December 15, 20000, order in this proceeding, have not proven to be sufficient to address the ability of market participants to charge excessive prices through the exercise of this market power,[3] and thus have not been successful in ensuring that California markets receive adequate supplies at reasonable prices. The ability of suppliers to exercise such market power will only increase as the summer peak season approaches, due to the high levels of demand growth throughout the West and below-normal availability of hydroelectric power (estimated to be roughly 50 percent below

---

[1] Since Commission staff has requested that any responses be submitted within a week of the filing of the original comments, these Reply Comments address only certain comments submitted by other parties.

[2] The DMA has noted the exercise of market power by individual suppliers and suppliers in aggregate. *See*, Report on the California Energy Market Issues and Performance: May-June, 2000, page 5 and 50. *See also*, Declaration of Eric Hildebrandt in support of Proposed Offer of Settlement filed on October 20, 2000 and Attachment A to the Comments of the CAISO on the Order Proposing Remedies For California Wholesale Electric Market. *See*, Comments of the California Independent System Operator Corporation, dated November 22, 2000 in *San Diego Gas & Electric Co.*, Docket No. EL00-95 *et al.*

[3] The DMA is currently preparing its analysis of January bids in the ISO markets above the $150 "breakpoint." Pursuant to the Commission's December 15, 2000 order in this proceeding, 93 FERC ¶ 61,294, the ISO is preparing to submit this analysis to the Commission on February 15, 2001.

normal). The energy markets in California, and perhaps throughout the West, therefore will not produce competitive outcomes for the foreseeable future.

Unless decisive action is taken to limit the ability of market participants to exercise market power, suppliers will continue to charge prices substantially above competitive levels for electricity in California and throughout the West, forcing load-serving entities to face unacceptable tradeoffs between severe cost impacts and involuntary load curtailments. Although the State of California is making every effort to secure long-term energy contracts, an assessment of the Summer 2001 picture indicates that California will still have to purchase significant volumes in the spot markets and will have very limited price responsive demand. The ISO is very concerned that it will find itself in emergency conditions through much of the summer, where every MW is needed to avoid involuntary outages and suppliers are able to exploit the situation to exact unreasonable prices to serve California load. It is therefore imperative that the Commission adopt effective market power mitigation measures to be in place by Summer 2001. Otherwise California's ambitious efforts to move towards workably competitive electricity markets, and to expand California's participation in a western regional market will likely be judged a failure or too great a risk, and will be abandoned.

To allow an orderly transition to a workably competitive market, the ISO has developed a comprehensive proposal to mitigate market power, with a particular focus on short-term measures that will provide the market signals needed to attract new resources and develop price responsive demand, while addressing the significant market power that will impact the markets this coming summer and over the next few years. The State of California is currently taking significant steps to fix some of underlying factors that create market power opportunities, particularly the lack of forward contracting and existing barriers to investment in new generation and transmission. However, in light of the evidence that existing market power mitigation measures are not proving successful, the efforts of parties in California cannot be successful unless the Commission takes additional action to discipline the market power of suppliers in the near term. The ISO recognizes that some of the measures in its draft mitigation plan may go beyond the market monitoring and targeted market power mitigation proposal that the Commission staff may be contemplating. However, the ISO believes that its plan will complement any proposal ultimately put forth by the Commission staff, and urges the Commission to recognize that adoption of a comprehensive market power mitigation plan is critical to resolving the current crisis in California.

Many parties expressed support for the ISO's draft proposal in their comments. For example, the Public Utilities Commission of the State of California ("CPUC") generally supports the ISO's proposal, including the forward contracting elements of the proposal. CPUC at 6. The CPUC also notes that the ISO's proposal is consistent with the Commission's October 30, 1997, order authorizing the operation of the ISO, wherein the Commission directed that variable-cost-based bid caps and availability standards be developed for the California wholesale electricity markets.[4] The Utility Reform Network and the Utility Consumers Action Network ("TURN/UCAN") support the ISO's proposal and state that they "have high hopes that the CAISO's proposed approach to market power mitigation, which is based fundamentally on RSBCs [resource-specific bid caps] and the use of bilateral contracts, will be broadly supported by other California State entities, other regional entities, and a significant contingent of private enterprise as well." TURN/UCAN at 4. The County of San Diego ("San Diego") also generally supports the ISO's proposal. These comments mirror statements made by representatives of some of the investor-owned utilities at the January 23 conference indicating their agreement with the approach to market power mitigation laid out in the ISO's proposal.

Some parties in this proceeding claim that virtually no restrictions should be imposed on energy prices in order that incentives be created for the construction of new generation and the development of demand response. Some parties even claim that the appropriate response to the exercise of market power is to "do nothing." See PSEG at 5. This position is inconsistent with the realities of the California electricity markets and ignores a fundamental principle of scarcity pricing. The entire concept of "legitimate" high scarcity prices and their role as investment incentives rests on the ability of consumers to respond to high prices by curtailing demand and on the absence of barriers to entry of new supply. Both of these requirements are severely lacking in California at present. Despite substantial efforts on the part of the State to accelerate the construction and siting of new generation, supply conditions will remain tight for the

4 *See Pacific Gas & Electric Co. et al.*, 81 FERC ¶ 61,122 at 61,537-48 (1997).

next few years. It will also be some time before demand can become sufficiently responsive so that high prices will be constrained by demand's willingness to pay. Suppliers with market power should not be given the ability to earn unrestricted windfall profits in the mean time. The ISO's proposal would allow for prices of a sufficient level to send price signals for the construction of generation and the development of demand responsiveness, but also recognizes that additional measures are necessary to ensure that electricity is available at just and reasonable rates while the market responds to these price signals.

A number of parties submitting comments in this proceeding, including some of those who generally support the ISO's proposal, raise questions or concerns about aspects of that proposal, which we address in some detail below.

In addition, the California Department of Water Resources ("CDWR") filed comments in this proceeding yesterday requesting that the Commission refrain from adopting new requirements which may have an impact on CDWR's new role in the California electricity markets pursuant to state legislation. The ISO recognizes the importance of adapting any market power mitigation proposals to the swiftly-changing conditions in the California electricity markets. As CDWR acknowledges in its comments, the ISO has already been engaged in discussions with CDWR staff to address their concerns. These discussions will continue. The ISO believes its market power mitigation plan will not interfere with CDWR's statutory responsibilities. Moreover, the ISO believes that its plan will provide greater incentives for suppliers to engage in forward contracting, thereby facilitating CDWR's role under the state legislation. For the reasons discussed above, the ISO urges the Commission not to defer adoption of those market power mitigation measures which will be needed for this summer. Failure to act in advance of the summer could be disastrous for electricity markets in California and the West. The ISO responds to some of the specific concerns that CDWR has raised in the discussion below.

Overall, it should be noted that the ISO's market power mitigation plan is not necessarily in its final form; it has already been modified based on input received from wide variety of stakeholders, and may be further modified as the ISO receives further input and develops the details of the proposal. In its February 6 Comments, the ISO stated its intention to continue discussions with stakeholders over the next month, prior to finalizing and filing its proposed market power mitigation plan. Consistent with this commitment, the ISO held a stakeholder meeting on February 13, 2001, to discuss the market power mitigation proposal.

In the following sections, the ISO provides responses to questions and concerns about aspects of its proposed market power mitigation plan raised in the comments submitted by various parties last week.

A. Forward Contracting Requirement

The long-term market structure envisioned by the Commission in its November 1 and December 15, 2000, orders in this proceeding is a market based on adequate forward contracting and a small spot market that provides the price signals necessary to attract new supply and encourage demand to become price responsive. The ISO's draft market power mitigation plan is designed to facilitate and build upon such a market structure. The first facet of the ISO's plan is to establish significant targets for forward contracting between suppliers and consumers in California. The ISO believes that if there is sufficient forward contracting, at just and reasonable rates, the volume of energy traded in the spot markets will decrease, thus decreasing the ability of suppliers to demand high prices in the "last chance" spot (*i.e.*, day-ahead, day-of, and real-time) energy markets. The ISO proposes to establish a threshold for suppliers to have 70 percent of their portfolio committed or available under forward contracts with California load-serving entities for the super-peak season, and certain lower percentages during other periods of the year. The ISO's proposal does not contemplate mandatory forward contracting, but those suppliers that do not satisfy the forward contracting threshold would be subject to stricter mitigation measures in the California spot markets.

The level of forward contracting contemplated in the ISO's proposal is consistent with recommendations from the ISO's independent Market Surveillance Committee ("MSC"). In a December 1, 2000, report, the MSC recommended that, as a prerequisite to enjoy market-based rate authority in California markets, all sellers of energy and Ancillary Services in California (other than the three California investor-owned utilities, which are currently subject to other requirements under state regulation) should forward contract for a percentage of their expected sales into the California electricity markets over the next two years at no more than an average competitive benchmark price. Following the Commission's January 23 technical conference Dr. Frank Wolak, Chairman of the MSC, provided the ISO with further comments that were filed in this proceeding on February 6. In those comments, Dr. Wolak reiterates the MSC's recommendation and indicates that the forward contracting threshold for market-based rate authority should be set no lower than 70 percent.

Mirant California, LLC, Mirant Delta, LLC, and Mirant Potrero, LLC (collectively "Mirant") submitted comments objecting to the ISO's forward contracting proposal on a variety of grounds. Mirant claims that the ISO proposal fails to take into account various contracts into which suppliers have already entered or which suppliers may currently be negotiating. In addition, Mirant joins with a number of other suppliers[5] in the submission of a limited market monitoring and mitigation proposal, which is prefaced with a criticism of the ISO's forward contracting proposal. Mirant claims that the ISO's proposal "rejects the possibility that parties will be able to successfully negotiate long-term contracts at prices that reflect a more rational market, or that the California legislature and the CPUC will make necessary alterations to the current regulatory structure to restore health to the market and to the purchasing IOUs." Mirant, *et al.* Proposal at 2.

Mirant's comments are both overblown and premature. Mirant fails to recognize that the 70 percent forward contracting threshold is not a mandatory requirement, but is simply a proposed pre-requisite for a supplier to be subject to less stringent mitigation in the spot markets. The contracts remain voluntary – the ISO's proposal simply strengthens the incentives of various parties to achieve the end-state envisioned by the Commission in its November 1 and December 15 Orders. Suppliers can choose to comply with the 70 percent threshold, or not, based on their assessment of the financial benefit of their existing contract commitments and the profit to be earned by the remaining capacity under the proposed spot market mitigation measures. Moreover, to the extent voluntary contracts already exist with ISO load-serving entities or are

[5] The suppliers joining with Mirant in this filing are Reliant Energy Power Generation, Inc., Duke Energy North America, LLC, Duke Energy Trading and Marketing, LLC, Dynegy Power Marketing, Inc., and Williams Energy Marketing & Trading Co.

currently being negotiated, such contracts would count toward satisfying the 70 percent contracting threshold.

To be considered "compliant" a supplier must demonstrate that it has offered or contracted 70 percent of its capacity with ISO load-serving entities for the super peak season, and has met the lower threshold levels specified in the ISO proposal for non-super peak periods. To the extent a supplier's "offers" (rather than signed contracts) are used to meet any of these thresholds, these offers will need to be at or below a benchmark price for reasonable offers and to have been widely advertised for a sufficient period of time (*e.g.*, such offers will need to have been made in a public forum, such as via a posting on the ISO's web site for a three week period).

In specifying these thresholds the ISO is in no way attempting to predetermine or define the ratio of short-term and long-term contracts that may comprise a load serving entity's portfolio of forward contracts. The ISO recognizes that each load-serving entity in California ultimately must determine the resource mix that is appropriate to satisfy its own needs. For example, the California Department of Water Resources ("CDWR") has recently solicited, on behalf of load in California, bids to provide a mix of short and long-term energy contracts. It is not the ISO's intent to predetermine what mix of short and long-term contracts is appropriate for CDWR. Rather, the ISO, by requiring suppliers to forward contract a certain amount of their available generation in order to qualify for less stringent mitigation in the California spot markets, is attempting to create incentives for such suppliers to step forward and offer energy at reasonable prices to entities such as CDWR. Thus this provision primarily serves to ensure that individual suppliers are not so significant in the spot markets as to be able to raise prices to unjust and unreasonable levels.

B. Available Capacity Reserve and Availability Requirements

The second element of the ISO's draft plan is designed to ensure that load-serving entities have an incentive to contract with suppliers at a level sufficient to satisfy their own load and meet their share of system reserve requirements. The ISO proposes to establish an Available Capacity Reserve ("ACR") requirement, pursuant to which load-serving entities must demonstrate to the ISO a specified amount of capacity secured by ACR contracts. The ISO currently contemplates that the ACR requirement would be phased in over time, perhaps three years: load-serving entities would be required to secure an amount of capacity equal to 95 percent of their seasonal peak load in the first year, 105 percent in the second year and up to 115 percent by the third year. This capacity could be made up of forward, bilateral energy and Ancillary Service contracts, the entity's own generation, and load curtailment programs, with any remainder of the requirement to be satisfied through bilateral ACR contracts.

In order to ensure that suppliers make their capacity available to load-serving entities so that such entities can satisfy the ACR requirement, and in order to prevent physical withholding from the market, the third element of the ISO's proposal is a simple Availability Requirement on suppliers. This proposal would require all in-state suppliers to schedule or bid all of their available capacity (*i.e.*, capacity that is not forward contracted or on planned outage) into one of the energy or Ancillary Service markets, subject to certain penalties for non-compliance.

These two elements of the ISO's plan work hand-in-hand. The ACR requirement would provide a strong incentive for load-serving entities to enter into contractual arrangements with suppliers for energy or capacity. Since suppliers would have the opportunity to be compensated in advance for their availability, the ISO believes that the proposed Availability Requirements would not be onerous and would provide a reliable revenue stream that will increase the incentives for new generation investment. Thus the proposal would establish requirements on both load (through the ACR) and suppliers (through the Availability Requirement) so that there will be balanced incentives to have sufficient supplies identified ahead of time rather than continuing to rely on last minute spot market transactions to assure reliability.

The ISO acknowledges that immediate implementation of the ACR proposal could impose a substantial burden on load-serving entities if they have not had the opportunity to cover a good portion of their ACR obligation with forward contracts for energy or Ancillary Services. For this reason, and in view of the current financial difficulties of the largest load-serving entities in California, the ISO has modified its market power mitigation plan with respect to the initial level and timing of the ACR requirement. As described in Attachment A to the ISO's February 6 Comments, the ACR requirement would start at a lower level than the full 115 percent of peak load and increase gradually over a few years. The ISO is also considering waiving the penalties to load-serving entities for failing to meet the ACR requirement initially, until they have sufficient opportunity and the financial resources to satisfy the proposed requirements.

The ISO believes that, by phasing in this requirement over the first few years, the ISO will allow the necessary time for certain transitory mechanisms to work. For example, by phasing in the ACR requirement over a two to three year period, the ISO will enable CDWR to transition from its current, temporary role as a California load-serving entity back to its original role in the California markets. The phase-in of the ACR measure will enable CDWR to fulfill certain of its statutory responsibilities and transition back to its previous role prior to incurring any obligations or costs under the ISO's proposal.

A number of parties commented on the ACR proposals. One party, Strategic Energy, L.L.C., claims the ACR proposal will be costly without providing any benefit. Strategic Energy further claims that the ACR proposal is no different from the Installed Capacity ("ICAP") markets that currently are (or have been) operated by eastern independent system operators, and argues that all such markets are necessarily flawed.

The ISO completely disagrees with the comments of Strategic Energy. The ISO believes the ACR proposal, and the related Availability Requirements, are a necessary measure to promote investment in generation and to mitigate market power by ensuring adequate supplies to meet system loads and reserve requirements. This is particularly critical at a time when there is a serious shortage of generation capacity in California and every attempt must be made to identify, ahead-of-time, the resources needed to meet peak demand. As described in the ISO's February 6 filing, the ACR and availability requirements are designed to reduce costs to consumers in the short-term by identifying needed supplier ahead of time, and in the long-term by facilitating generation investment.

As experience in the California markets last summer amply demonstrates, when entities in those markets wait until the last minute and then scramble to secure generation, the load will pay an extremely high price. This is one of the fundamental conclusions of the Commission's investigations into the California markets. The ACR proposal, coupled with real-time bid price mitigation, will greatly lower overall costs in the real-time market, because much of the capacity for meeting load will have been procured and paid up-front. Indeed, the ACR and Availability Requirements are designed to work in conjunction with the other elements of this proposal to ensure that price spikes apply only to a small quantity of transactions and ensure the entry of new supply into the market. The direct benefits of such measures could amount to hundreds of millions if not billions of dollars.

Strategic Energy's comments are based in large part on its failure to distinguish between the ISO's ACR proposal and the existing ICAP markets in other areas. For example, Strategic Energy claims that the competitive price for a capacity credit is always bipolar – either zero or maximum. The ISO is well aware of the volatility of ICAP auction markets and therefore, as explained in the ISO's February 6 Comments (*see* Attachment A at pp. 12-15), the ISO's ACR proposal is designed to be different from an ICAP market in many respects.

The proposed ACR requirement can be satisfied through a load-serving entity's own generation, forward contracts for energy, forward contracts for Ancillary Services, interruptible load programs, and bilateral ACR contracts for any residual ACR capacity requirement not covered by the other elements. Hourly pricing in capacity markets has been shown to be volatile in eastern independent system operators. The ISO believes seasonal bilateral transactions are a more appropriate mechanism for acquiring this type of capacity service. Under such a mechanism, load has the greatest flexibility in negotiating the type of service needed and the widest variety of choices available as to the source for that service, be it interruptible load contracts, seasonal capacity products from in-state suppliers or importers, or the acquisition of generation by the load-serving entities themselves. Given this flexibility for entities to satisfy the ACR requirements, the overall costs of satisfying ACR requirements should be much less, and much less volatile, than the cost of an ICAP capacity credit.

Another significant distinction is that the ISO does not intend to create a centralized ACR auction market as most ICAP markets have. If market participants wish to develop such a market, they will be free to do so. Finally, to the extent that there might be high prices associated with satisfying a load-serving entity's residual ACR capacity requirement, such prices will attract generation investment when there is a shortage of installed capacity. This is consistent with the price signal that generators (including potential builders of generation) and load should receive in a market with capacity shortages. If and when there is a capacity surplus and significant effective demand responsiveness in the California electricity markets, the cost of meeting the ACR requirement will decline dramatically.

Strategic Energy suggests that generators do not include revenues from the sale of capacity credits in their projections when they evaluate proposals for new generation projects. The ISO strongly believes that, given the current generation capacity shortage in California (a shortage which may persist for several years), a steady revenue stream at a low to moderate profit margin will be much more effective in attracting generation investment than extremely high and volatile energy prices that no party believes should, or will, be sustained for the foreseeable future. A residual ACR requirement, with a *de* *facto* price cap equal to the penalty to load-serving entities for failure to satisfy the ACR requirement, will provide an appropriate price signal to the market – both for entry of new supply and for demand reduction.

In contrast to the comments of Strategic Energy, the comments of Public Service Energy Group, Inc. ("PSEG") support implementation of a capacity requirement in California. Although PSEG did not comment directly on the ISO's proposal, it does criticize California for failing to maintain a capacity reserve requirement. Given the lag in the construction of new generation, PSEG asserts that "only when a significant amount of retail demand-side response materializes can consideration reasonably be given to reducing or eliminating a capacity reserve requirement." PSEG at 7. While the ISO strongly agrees with the thrust of this comment, we note that under the proposed ACR design a load-serving entity can rely on curtailable load programs to satisfy ACR requirements, and therefore there would be no need to explicitly change the proposed ACR requirements as load becomes more price-responsive. Demand-side responsiveness will be just one more component available to satisfy the proposed ACR requirement.

A number of parties submitted comments on the ISO's proposed Availability Requirement. Modesto Irrigation District ("MID") expresses concern that the availability standards proposed to date do not adequately accommodate the flexibility which irrigation districts must have in order to balance their potentially competing legal obligations with respect to irrigation and power production. The ISO believes that, to the extent such irrigation obligations are predictable, they can be taken into account in the annual planning of Availability Requirements, with provisions for seasonal (or possibly monthly) updates in conjunction with the ISO's proposed outage coordination process. The proposed revisions to the outage coordination process provide for such input to help levelize system reliability throughout the year. However, once the applicable Availability Requirements are established with appropriate input from the irrigation districts, all suppliers would be expected to comply with these requirements.

The Northern California Power Agency ("NCPA") raises concerns about the ISO's proposed Availability Requirements that are related to generation outages. NCPA objects to aspects of the ISO's proposal that would create a penalty for a generator experiencing an unscheduled or forced outage. NCPA takes issue with the proposed penalty, arguing that the ISO should instead invest in sufficient staffing and resources to investigate each forced outage of generation after the fact in order to determine whether the outage resulted from a genuine breakdown or from a market manipulation scheme.

The ISO disagrees with NCPA's critique and its alternative proposal for a number of reasons. First, the intent of the proposed availability penalty is to provide appropriate incentives for generators to coordinate and manage outages. It is appropriate for generation owners to bear certain costs associated with even legitimate forced outages, as they are the entities in the best position to prevent, through proper and timely maintenance, such outages from occurring. Therefore the ISO's approach assigns the risk of forced outages to the entity best able to manage such outages and to minimize their impact on the system, namely, the generation owner. NCPA would apparently have the entire marketplace bear the costs and risks associated with forced outages.

Second, ISO investigation of every forced outage is unworkable. In practice, it would be incredibly costly for the ISO to inspect every forced outage, nor would such inspections likely yield conclusive results. Distinguishing between a legitimate forced outage and a fabricated "outage" is extremely difficult. A generation owner can always assert that a unit must be taken down because equipment is susceptible to failure and must be repaired or replaced (or even inspected).

Finally, NCPA fails to consider that the proposed Availability Requirements would operate in conjunction with the proposed ACR requirements. Under the ACR proposal, generation owners can and will be paid for making their capacity available, whether pursuant to long-term energy contracts, long-term Ancillary Service contracts, or contracts for residual ACR capacity. Once a generation owner enters into such contractual arrangements, the Availability Requirements will, in essence, be superseded by the contractual obligation for such generation to be available. The generation owner will be fairly compensated for the services it supplies, and failure to provide such services would be a breach of contract, which is appropriately subject to a penalty.

C. Outage Coordination

In connection with the proposed market power mitigation plan, the ISO also intends to develop and file a Planned Outage Coordination requirement. The ISO's proposal would require that generators submit to the ISO their scheduled outage plans. Under this proposal, the ISO would have the ability to coordinate generation maintenance and repair schedules in a manner consistent with reliable operation of the system, while taking into account the preferred maintenance schedules submitted by each generation owner, along with permissible time windows specified by the generation owner (consistent with industry maintenance standards) within which such maintenance schedule could be delayed or advanced. In addition, the ISO would also need to coordinate generation outage schedules with planned transmission maintenance. Thus the ISO would coordinate all planned generator and transmission outages so as to minimize the number of days when a significant amount of generating capacity is unavailable, an event that has been common in California over the past few months.

The NCPA takes issue with the foundation for the ISO's proposal, arguing that the ISO ordered a total of 77 "no touch" days in the year 2000, during which generators had to defer maintenance. NCPA contends that it is no surprise that forced and unplanned maintenance outages have reached unprecedented levels. The ISO recognizes and appreciates the efforts of generators to make their capacity available to the ISO this past year and further recognizes that some generators have modified scheduled maintenance outages at the request of the ISO. The ISO believes that its proposal to actively coordinate planned outages will alleviate some of NCPA's concerns. In fact, one of the reasons why the ISO needs to ask generators to postpone maintenance is the lack of scheduled maintenance coordination. Once the outage coordination proposal is implemented, the ISO anticipates a significant decrease in the frequency of ISO requests for generators to delay maintenance. Moreover, if the scheduled maintenance is delayed due to the ISO's request, the reference for determining available capacity would be adjusted accordingly. The ISO expects that with proper outage coordination ISO requests to defer maintenance will be rare enough so as not to impact the forced outage rate of generating units.

NCPA also raises concerns about existing penalty provisions in the ISO Tariff that are only tangentially related to the ISO's market power mitigation proposals. The

ISO Tariff currently requires Scheduling Coordinators that fail to provide generation scheduled in the forward markets to purchase replacement power at the real-time price. NCPA argues that this has the unintended consequence of providing an incentive for Scheduling Coordinators to keep some of their generation in reserve against their single largest contingency. While NCPA's argument may have some validity with regard to the forward markets, the ISO believes that these provisions do not create an incentive for generation to be withheld from the ISO's real-time markets. If a unit is set aside by the owner to be able to generate in the event of a generation contingency (forced outage), it must either be on-line or have a very short start-up time, both of which make it eligible to bid in the real-time market. According to NCPA, the generator is being held in reserve for that Scheduling Coordinator's single largest contingency, *i.e.*, the loss of the largest unit in the Scheduling Coordinator's portfolio. In such a case, the highest price that the Scheduling Coordinator faces is the real-time price. But, by keeping the other generator as standby, the Scheduling Coordinator is already foregoing some real-time revenue that it could otherwise generate.[6] Therefore, the only rational explanation for why generation is being withheld from the real-time market is to ensure that the real-time price does not drop due to its participation. This is exactly the sort of physical withholding the ISO's proposals are intended to address.

---

[6] A simple economic argument demonstrates why keeping such generation in reserve for forced outages is not rational. The expected cost to a Scheduling Coordinator who does not retain such reserves is r*p per MWh, where r is the probability of a forced outage and p is the real time price. The additional profit which could be earned from generation held in reserve against a forced outage is (p-mc) per MWh, where mc is the marginal cost. Studies conducted by the ISO show that the price cost mark-up (p-mc_sys) is substantial for most of the hours with high load. Therefore during those periods, the additional profit to be earned far exceeds the expected penalty associated with a forced outage.

D. Bid Price Mitigation

The final major elements of the ISO's market mitigation plan are proposals to mitigate the exercise of market power both on a system-wide level through economic withholding (*i.e.*, bidding significantly in excess of cost), as well as on a local level when a resource is needed to ensure local reliability. Mitigation of local market power on a permanent basis has been considered by the ISO as an element of the reform of Congestion Management, which the recent course of events suggests may not be implemented before 2002. Until more permanent measures can be put in place, the ISO believes that the bids of those entities possessing local market power must be mitigated by limiting such bids to variable cost or certain market indicia.[7]

In order to prevent the exercise of system-wide market power in real-time, the ISO proposes that FERC establish resource-specific bid caps (*e.g.*, variable cost or opportunity cost for energy-limited resources, plus a fixed margin). The ISO believes that these bid caps could be set at a level which is sufficiently high to send strong price signals to provide incentives for the development of price responsive demand and new investment in generation.

Two parties that generally support the concept of bid price mitigation raise specific concerns about the ISO's proposal. San Diego does not agree with the ISO's proposal to include a fixed margin above marginal production cost as part of the proposed resource-specific bid caps. San Diego at 5. The ISO believes that, at a minimum, this adder is necessary in order to allow resources to recover their costs. In

---

7 The ISO notes that the Commission has already approved similar measures for the PJM Interconnection and the New York ISO.

addition the margin performs an important function for “compliant” suppliers – it allows room for market demand and supply conditions to set the correct market price, to attract new investment and the development of needed demand-side response programs. This is one of the fundamental principles of the ISO’s proposed two-tiered design: Tier One of the proposal concerns long-term contracts to ensure supply at just and reasonable rate; and Tier Two provides for a relatively free market (when the margin is high enough) for a small fraction of the load in order to preserve market incentives and benefits. The margin is intended to do more than cover the operating costs of a resource, it is the means to provide fixed cost recovery, and in the case of “compliant” suppliers, extra return to investment. The margin provision is also important with respect to “non-compliant” suppliers that do not satisfy the proposed forward contracting threshold. Absent the fixed margin, such suppliers would only be entitled to recover their variable costs and therefore might not be able to recover their start-up, no load, or other actual costs (such as gas imbalance penalties and emissions charges). The margin for “non-compliant” suppliers will be much smaller than for compliant suppliers and will be applied as a payment cap.

TURN/UCAN also supports the concept of resource-specific bid caps, but argue that these caps should change in direct relationship to prevailing fuel and NOx emission prices. TURN/UCAN at 7. The ISO agrees that fuel prices should be included in resource-specific bid caps (*i.e.*, the bid caps should be indexed to spot gas prices). The ISO also agrees that NOx emission prices should be covered for system-wide market power mitigation and for local market power mitigation under the interim approach. However, for the longer-term local market power mitigation approach, which the ISO has considered in conjunction with the reform of Congestion Management, the ISO believes that fixed option payments should be made up front to cover costs other than fuel-adjusted variable costs (start-up, gas imbalance penalties, emission credit limit violation penalties, and incremental going forward fixed costs). Including such costs in an up-front payment, rather than including them as a margin in the resource's mitigated bid caps, is the appropriate long-term solution because of the high frequency of occurrence and predictability of local reliability requirements in constrained areas of the grid. Such an approach would be analogous to the fixed payments made today under the Reliability Must Run ("RMR") Contracts, and would prevent the recurrence of the perverse physical withholding incentives that were associated with the ISO's initial "type A" RMR Contracts.[8] The long-term approach would also provide for short-term fixed payments for resources needed to ensure local reliability on a temporary basis, e.g., in the event of transmission maintenance outages that create unusual local reliability needs. The ISO does not envision that such RMR-type payments to a resource would result in a double payment to that resource under the ACR proposal. Capacity committed under such an approach to locational market power would be an acceptable way to partially satisfy the ACR requirements of the load-serving entities in the corresponding local reliability area.

---

[8] Under the original type A RMR Contracts, RMR Unit owners had an incentive to withhold from the market and be called under the contract, because the Availability Payment rate was set high and provided for full recovery of fixed costs and of such costs as emission credit related penalties. Moreover, RMR Unit owners were paid the Availability Payment each time they were called. Therefore, in order to avoid creating type A incentives, the ISO believes that it is better to include such costs in an up-front payment to those resource needed for local reliability that can exercise local market power, consistent with the current structure of RMR contracts.

E. Release of Market Information

NCPA argues that bid and price data should be disclosed the day after the operating day. It maintains that the current requirement to keep unit bid data confidential for 6 months was a mistake. The ISO notes that the release of bid data after a six-month lag, which was proposed in Amendment No. 25 to the ISO Tariff, is consistent with Commission requirements for other independent system operators. In Amendment No. 25, the ISO also proposed Tariff revisions which would permit the ISO to release bid data used as the basis of a report prepared by the DMA or MSC with as little as a month's lag. The Commission rejected this proposal.[9]

The ISO generally supports the concept that data should be released prior to six months. Events over the past year have shown the substantial need for data to be made available to regulators and market participants so that they may undertake an assessment and study the functioning of the electricity markets. Over the next several months, the ISO will endeavor to develop and file with the Commission revised policies regarding the provision of market information to regulatory agencies and to market participants. These policies will not only address what information is provided to such agencies, but also the circumstances and conditions under which such information will be provided. The ISO's revised information policies will pertain not only to the Commission, but also to the applicable state agencies which, as the Commission has recognized, have a legitimate role in monitoring market activity to ensure just and reasonable rates to end use customers. The ISO's proposal will also address the release of market information to market participants.

---

[9] *California Independent System Operator Corp.*, 90 FERC ¶ 61,316 (2000).

F. The Refund Period

San Diego expresses concern with the statement in the ISO's market power mitigation proposal that the Commission's review period and a supplier's obligation for refunds should continue to be limited to sixty days after a transaction, as provided for in the December 15 Order in this proceeding. As an initial matter, the ISO notes that the sixty-day period is only a limit on the time for the Commission threshold decision as to whether a particular transaction merits further investigation. With the other mitigation measures included in the proposed market power mitigation plan in place, the ISO believes there will be very few transactions which will merit such investigation. The onus on the Commission staff as well as on public parties to provide input with respect to particular transactions would therefore be much less than it is today. In such circumstances, the ISO believes a sixty-day window on making an initial determination of whether a transaction warrants further investigation is appropriate.

III. OTHER ISSUES

In addition to those comments addressing aspects of the ISO's proposals, the ISO also responds to the following general comments concerning market monitoring and market power mitigation.

A. Market Power

Mirant argues against the ISO's assertion that the exercise of undue market power continues to have an impact on the California electricity markets. Mirant suggests that the ISO's plan is based on an unsupported assumption that market power is rampant and that the ISO proposes broad intrusive remedies without demonstrating that market power exists. As discussed above, and in the ISO's February 6 Comments in this proceeding, the ISO has performed numerous studies and analyses which demonstrate the ability of market participants to exercise market power in the California electricity markets and quantify the cost impacts of such market power exercise. Based on initial results, the ISO believes that its analyses of prices in December 2000 and January 2001 will continue to demonstrate the substantial impact of market power on electricity prices and costs in California.

Mirant suggests that the ISO's definitions of physical and economic withholding do not take into account legitimate reasons why a supplier would not offer unsold capacity into a market or would only do so at prices far above marginal costs. While it is true that traditional market power theory generally discusses market power in the context of the physical withholding of supply from the market, similar impacts can be achieved when an entity has the ability to dictate prices in a market bids at excessively high prices (*i.e.*, economic withholding). Mirant fails to acknowledge the ability of entities in supply-constrained markets to influence prices unduly by offering capacity at prices far in excess of marginal costs.

Mirant contends that the ISO's analysis of market power ignores many legitimate costs, such as scheduled unit outages, emissions costs, and operational limits. This contention is incorrect. The ISO's analysis explicitly accounts for both forced and scheduled outages. As described in its November 22, 2000 filing in this proceeding, the ISO's methodology assumes that thermal units of the major non-utility owners are available only if metering and scheduling data indicate the unit was available that operating day.[10] The availability of all other units is also incorporated into this methodology, under which the amount of "residual supply" from these units is calculated by simply summing up the actual amount of generation provided or bid into the ISO system from these units each hour. In addition, the market power analyses presented at the January 23, 2001, technical conference include potential costs incurred due to high NOx emission credit costs reported in the South Coast Air Quality Management District.[11] Results of DMA's analysis are also consistent with similar analyses prepared independently by other parties and submitted in these proceedings.[12]

NCPA states that the Commission's "hub & spoke" test for market power is inadequate in a dynamic wholesale electricity market. As explained in the ISO's February 6 Comments in this proceeding, the ISO agrees fully that a "hub and spoke" static market concentration test for market power is insufficient to address the potential for entities to exercise market power in markets like those in California. The ISO believes that a grant of market-based rate authority based on that criterion should only be conditional, and that such authority should be reviewed and/or should be subject to additional conditions once actual market monitoring shows the price cost mark up index over a sustained period of time exceeds an acceptable threshold. In the past, the Commission has identified the ability of sellers to raise prices annually by 10 to 15 percent as a threshold indicating that a market participant may be able to exercise

[10] See Attachment A: Analysis of Market Power in California's Wholesale Energy Markets, November 21, 2000, p.3, included with the ISO's Comments on FERC's November 1 Order, submitted November 22, 2000.

[11] *See also* the presentation by Anjali Sheffrin at p.3. A more detailed summary and discussion of analysis of emissions is also included in the Market Analysis Report, Presented to ISO Board Meeting, November 30.

[12] *A Quantitative Analysis of Pricing Behavior in California's Wholesale Electricity Market During Summer 2000*, P. Joskow & E. Kahn, Nov. 21, 2000, included with Southern California Edison's Comments on FERC's November 1 Order, submitted November 22, 2000**.**

market power. For example, in the Commission's January 31, 1996, policy statement in *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines*, Docket No. RM95-6-000, and *Regulation of Negotiated Transportation Services of Natural Gas Pipelines*, Docket No. RM96-7-000, the Commission stated:

> In prior cases, the Commission has defined such a threshold price level as being at or below the applicant's approved maximum cost-based rate plus 15 percent. Several of the commenters suggest that the 15 percent threshold for price changes is inappropriate. They assert that a threshold at the 5-10 percent level is more consistent with current similar standards in the Department of Justice's merger guidelines. The Commission has studied the arguments made on this issue and we agree. *Accordingly, the Commission will adopt a pricing threshold of 10 percent.* The Commission believes that if a company can sustain an increase in its rates in the order of 10 percent or more without losing significant market share, the company is in a position to exercise market power to the detriment of the public interest. Although the Commission is adopting 10 percent as its standard price change threshold, it is not precluding individuals from making an argument for either a higher or lower threshold in any particular case. Applicants are free to argue for a higher threshold where they believe circumstances permit. Similarly, participants in the application proceeding are free to argue for lower thresholds. The Commission will consider the arguments presented and make a determination of the appropriate price change threshold on an individual basis whenever the issue is raised. In cases where the issue is not raised, the Commission will use 10 percent as the applicable price increase threshold. In addition, when applicants propose an appropriate threshold for price increases, they should also propose the time period over which the price increase could be sustained.[13]

The ISO strongly believes that any entity's market-based rate authority which was initially granted based on the Commission's "hub and spoke" analysis or similar standard for assessing market power should be re-examined if actual market monitoring shows such entities have had a significant influence over prices. Once the ability to exercise market power is evident, the Commission should impose strict market power mitigation measures, such as those that the ISO has proposed, or should withdraw the grant of market-based rate authority for that entity. Such actions are necessary for the Commission to fulfill its responsibility to ensure that energy is sold at just and reasonable rates.

B. The Independence of the Market Monitor

Both NCPA and Mirant argue that the entity monitoring the California electricity markets must be independent of the ISO. The ISO addressed issues concerning the independence of the market monitor in its February 6 Comments, and briefly reiterates that discussion here.

The ISO agrees that a market monitor should be independent; however, the ISO does not believe that such an entity must be separate from an independent system operator or Regional Transmission Organization. Such entities are, by the Commission's own definition, independent. The past actions of both the ISO's DMA and the MSC demonstrate that the independence of the market monitoring unit need not be compromised simply because that unit is part of, or affiliated with, an independent system operator. Since CAISO operations began in 1998, the DMA and the MSC have submitted to the ISO Governing Board, FERC and state agencies numerous reports and analyses detailing actual or potential instances of gaming and market power abuse. The objectivity of these reports is demonstrated by the fact that many of these reports have also been critical of the ISO's own practices and market design.

Those who argue for a market monitor independent from the ISO fail to recognize the advantages of a market monitor that is able to coordinate and interact on a regular

---

[13] *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines, et al.*, 74 FERC ¶ 61,076 at 61,231-32 (1996) (footnotes omitted).

basis with an independent system operator's operations staff and legal and regulatory staff. Such close coordination is essential if the market monitor is to fully understand the operating practices and procedures of the ISO. This type of understanding would be extremely difficult to acquire if the market monitor were external to the ISO. Thus, the ISO continues to believe it is perfectly appropriate for market monitors in California to be part of or affiliated with the ISO.

IV. CONCLUSION

The ISO wishes once again to express its gratitude to the Commission for providing a forum for addressing the critical issues of market monitoring and market power mitigation. As the Commission continues to examine and develop appropriate market monitoring and market power mitigation measures, the ISO believes the Commission must remain flexible and open both to measures at use in other markets and to new measures appropriate to the changing circumstances in California. In addition, the ISO urges the Commission to recognize the critical need for additional market power mitigation measures in the California markets. Failure to adopt the appropriate market power mitigation measures -- either as part of the Commission staff's proposal or in response to an ISO filing – will result in continued unconscionable prices in California and the West, with profound economic impacts on those parts of the country, severe risks of insufficient supply to meet the demand for electricity this coming summer, and a potentially fatal blow to competitive restructuring efforts within California and to California's full participation in the developing western regional markets.