

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**California Independent System)
Operator Corporation)** **Docket No. ER02-922-000**

**ANSWER OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION TO
JOINT MOTION FOR TECHNICAL CONFERENCE, MOTIONS TO INTERVENE
AND REJECT, REQUESTS FOR SUSPENSION, HEARING, AND
MODIFICATIONS, COMMENTS, AND PROTESTS**

I. INTRODUCTION AND SUMMARY

On January 31, 2002, the California Independent System Operator Corporation (“ISO”)¹ filed Amendment No. 42 to the ISO Tariff in the above-referenced docket. The ISO stated that Amendment No. 42 was intended to modify the provisions of the ISO Tariff to provide for the following: new provisions to facilitate participation in the ISO markets by eligible intermittent resources (e.g., wind); changes in the allocation for settlement Charge Type 487; changes in the management of Intra-zonal Congestion; and changes in the calculation of the Target Price for incremental and decremental Imbalance Energy bids. The ISO requested that these Tariff revisions be made effective April 1, 2002.

A number of parties have moved to intervene in the present proceeding. Some of the motions to intervene include motions to reject, requests for suspension, hearing, and modifications, comments, and protests concerning

¹ Capitalized terms not otherwise defined herein shall have the meaning set forth in the Master Definitions Supplement, Appendix A to the ISO Tariff.

Amendment No. 42.² Additionally, several parties submitted a joint motion for a technical conference in this proceeding. Pursuant to Rule 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213, the ISO now submits its Answer to the joint motion for a technical conference, motions to intervene and reject, requests for suspension, hearing, and modifications, comments, and protests submitted in the above-referenced docket.³ The ISO does not oppose the intervention of parties that have sought leave to intervene in this proceeding. However, as explained below, the ISO believes that the Commission should accept Amendment No. 42 in its entirety.

² Motions to intervene and reject, requests for suspension, hearing, and modifications, comments, and protests concerning Amendment No. 42 were filed by the following entities: the American Wind Energy Association ("AWEA"); California Department of Water Resources ("CDWR"); California Electricity Oversight Board ("CEOB"); Center for Energy Efficiency and Renewable Technologies ("CEERT"); Cities of Redding, Santa Clara, and Palo Alto, California, and the M-S-R Public Power Agency ("Cities/M-S-R"); City and County of San Francisco ("San Francisco"); City of Vernon, California ("Vernon"); Duke Energy North America, LLC and Duke Energy Trading and Marketing, LLC ("Duke"); Dynegy Power Marketing, Inc. ("Dynegy"); FPL Energy, LLC ("FPL"); Independent Energy Producers Association ("IEP"); Modesto Irrigation District ("MID"); Mirant Americas Energy Marketing, LP, Mirant California, LLC, Mirant Delta, LLC, and Mirant Potrero, LLC ("Mirant"); The Metropolitan Water District of Southern California ("MWD"); Pacific Gas & Electric Company ("PG&E"); Powerex Corp. ("Powerex"); Reliant Energy Power Generation, Inc. and Reliant Energy Services, Inc. ("Reliant"); Southern California Edison Company ("SCE"); Sacramento Municipal Utility District ("SMUD"); Transmission Agency of Northern California ("TANC"); Turlock Irrigation District ("Turlock"); Williams Energy Marketing & Trading Company ("Williams"); and Western Power Trading Forum ("WPTF"). A notice of intervention was filed by the Public Utilities Commission of the State of California ("CPUC"). Additionally, a joint motion for technical conference was filed by Duke Energy, Dynegy, IEP, Mirant, Reliant, and Williams ("Parties").

³ Some of the intervenors commenting substantively on proposed Amendment No. 42 do so in portions of their pleadings variously styled as "Comments," "Protest," or other headings, without differentiation. There is no prohibition on the ISO's responding to the comments in these pleadings. The ISO is entitled to respond to these pleadings and requests notwithstanding the label applied to them. *Florida Power & Light Company*, 67 FERC ¶ 61,315 (1994). In the event that any portion of this Answer is deemed an answer to protests, the ISO requests waiver of Rule 213 (18 C.F.R. § 385.213) to permit it to make this Answer. Good cause for this waiver exists here given the nature and complexity of this proceeding and the usefulness of this Answer in ensuring the development of a complete record. See, e.g., *Enron Corp.*, 78 FERC ¶ 61,179, at 61,733, 61,741 (1997); *El Paso Electric Co.*, 68 FERC ¶ 61,181, at 61,899 & n.57 (1994).+

II. ANSWER

A. Request for A Technical Conference

Several parties propose the Commission sponsor a technical conference to address Amendment No. 42 and to facilitate ongoing market redesign efforts in California.⁴ While the record shows that the Parties are incorrect in asserting there was no opportunity for comment on the issues in Amendment No. 42 and that there was, in fact, extensive stakeholder input for several of the proposed Tariff modifications, the ISO, nonetheless agrees that the Commission should host and facilitate a technical conference on market design issues. The ISO proposes such a conference be held in Washington D.C. at the earliest possible time. On the other hand, approval of Amendment No. 42 should not be delayed by such a conference, or even series of conferences, because the several proposed Tariff modifications are reasonable and needed by the ISO in the short-term. To the extent that additional modifications are identified in such a technical conference, the ISO commits to a timely filing of an additional amendment request for any such modifications as may be agreed upon.

B. The Proposed Process To Bring More Intermittent Resources Into the ISO Markets Is Fair And Reflects Public Consensus

Many parties expressed strong support for the proposed treatment of intermittent resources. Specifically, AWEA and FPL urge both expeditious approval and that the Commission, if necessary, sever this issue from other aspects of Amendment No. 42 and approve the intermittent resources modifications separately. AWEA at 3–6; FPL at 2-3. CEERT and WPTF urge

⁴ Parties at 1-5.

unqualified adoption of the intermittent resources proposals. CEERT at 3; WPTF at 18. The CEOB expresses support but also a concern that a better treatment for uninstructed deviations for intermittent resources would be to treat such resources' uninstructed negative deviations the same as for any other generating resources when the deviations are the result of anything other than forecast errors by the ISO. CEOB at 3-5. IEP expresses general support for the proposed treatment of intermittent resources but also proposes that, in the event there are "residual" uninstructed deviation costs associated with the generation from such resources, such costs be allocated to Scheduling Coordinators with net negative uninstructed deviations on the basis of total metered Demand, as opposed to the ISO's proposal to allocate such costs to all Scheduling Coordinators. IEP offers its proposal as a substitute for the ISO's, which IEP claims "would allocate those costs to all SC's." IEP at 3-4. In fact, the ISO's proposal would allocate these costs or credits only to those Scheduling Coordinators that have Net Negative Uninstructed Deviations in the relevant month.

Mirant, on the other hand, opposes the proposal to exempt Participating Intermittent Resources from charges for uninstructed deviations except where there are aggregate negative uninstructed deviations over a calendar month. Mirant argues that because other generating resources are charged for such deviations on a ten-minute settlement basis, the proposed settlement for intermittent resources discriminates against other generating resources whose output also is materially impacted by ambient conditions. Mirant requests the

Commission either reject the proposed settlement of uninstructed deviations for Participating Intermittent Resources or extend comparable treatment to all other generating resources whose output varies markedly as a result of ambient environmental conditions. Mirant at 15-17. MWD is concerned that the ISO accord the proposed exemption from uninstructed deviation penalties, set forth in Tariff Section 11.2.4.2.1(e) to any intermittent resources, as opposed to only new intermittent resources. MWD at 6-9. Reliant asserts that the proposed treatment of intermittent resources be implemented on a preliminary basis, subject to review in, *e.g.*, 16 months, especially if, for example, such resources' total share of generation supply in the ISO Control Area should expand to a given percentage, *e.g.*, five percent (5%).

SCE asks that the ISO's proposed treatment of intermittent resources be modified to accommodate the development of renewable Energy in California by (1) being put into place as an interim measure subject to study, to be filed with the Commission, of direct and collateral costs associated with each type of intermittent resources in the ISO markets and the development by the State of California's public subsidy program for allocation of the costs of renewable Energy to all ratepayers in California; (2) allocation of costs associated with Participating Intermittent Resources being spread to all Scheduling Coordinators in proportion to their respective Energy usage; (3) and removal from proposed Amendment No. 42 of the exclusion of PURPA or non-Participating Generator Agreement ("PGA") intermittent resources from the proposed monthly settlement of uninstructed deviations. SCE at 2-5. SMUD supports the proposed treatment

of intermittent resources but urges the Commission to require the ISO to provide an estimate of the costs associated with its proposal and to include in its Tariff a requirement for intermittent resources to make “best efforts” to avoid uninstructed deviations and to ensure full cost recovery from such resources for the costs of forecasting. SMUD at 3-5. Lastly, SMUD believes the ISO’s technical standards for Participating Intermittent Resources should be included within the ISO Tariff as opposed to being posted on the ISO Home Page. *Id.*

TANC, while supporting the development of renewable resources, is concerned about apparent “discriminatory provisions” that favor development of such resources and urges the Commission to ensure such preferential treatment not establish a precedent which can be spread to other Market Participants and thus further “distort market prices.” TANC at 10.

The ISO appreciates the generally favorable responses to its proposal to help bring Eligible and Participating Intermittent Resources into the ISO Control Area’s diverse portfolio of generating resources. To the extent that such intermittent resources require certain accommodations, based strictly upon their operating constraints, the ISO has proposed narrowly-tailored exceptions to its Tariff’s general provisions for Dispatch, Scheduling and Settlement.

The single largest point of concern is the proposed methodology for settling Participating Intermittent Resources’ negative uninstructed deviations, specifically on a calendar basis, as opposed to the ten-minute interval used for other types of generating resources participating in ISO markets. It appears that some parties, while not overtly opposing intermittent resource development, are

reluctant to acknowledge the necessary constraints on such resources that preclude adequate operational control of the units to prevent uninstructed deviations. Simply put, despite unrealistic requests that the Commission ignore such constraints and treat intermittent resources the same as, for example, thermal units, it is patently clear that a one-size-fits-all approach will not suffice. To that end the ISO has developed, in close collaboration with intermittent resource developers and operators and a range of ISO Market Participants, a compromise proposal that seeks to balance general principles of charges based upon cost-causation with the public's interest in encouragement of diverse, environmentally-benign sources of power.

The ISO's proposal is far from a "free ride" for intermittent resources. The proposal requires Participating Intermittent Resources to telemeter data in support of state-of-the-art, unbiased hourly forecasts of Energy output, and to Schedule Energy every hour based on the most recent forecast. All ISO *pro forma* agreements must be executed, an ISO-approved meter must be installed, a forecast fee paid, and any costs associated with this proposed program will be closely monitored. In addition, if the ISO is, as is fully anticipated, successful in developing unbiased forecasts, then the expected uninstructed deviation in each hour is likely to approach or equal zero. Thus, the instant proposal is a reasonable and fair compromise tailored to the unique characteristics of intermittent resources and public interest in such resources.

The ISO respects existing environmental constraints as required by Tariff Section 2.2.1. If another generating unit can show it is similarly operationally-

constrained by ambient environmental conditions such that it is unable to control not just the level of its operation but also when it operates or is shut-down or otherwise avoid uninstructed deviations, such as is asserted, without support by Mirant at 15-17, then the ISO would carefully consider appropriate accommodations for any such units as well.

The ISO acknowledges the concern raised by CEOB about forecast accuracy, and notes that it will be monitoring forecasts to assure they are unbiased, and validating Schedules to confirm that Participating Intermittent Resource Schedule Energy in accordance with the ISO's most recent hourly forecast. The CEOB implies that there may be unintended consequences if intermittent renewable resources seek to manipulate Energy output by withholding Energy during peak Load periods, or over-generating during low Load periods. If a Participating Intermittent Resource fails to Schedule in accordance with the forecast, then the risk mitigation provided by the instant proposal is withdrawn. Since these resources are, by their nature, non-Dispatchable, the opportunity for manipulating output is limited. The ISO's proposal neither increases nor decreases any existing incentive for such behavior. Inasmuch as there is no evidence of intermittent resources currently seeking to manipulate output, the ISO believes it is sufficient to closely monitor uninstructed deviations and, if systematically undesirable behavior is observed, the ISO will consider additional modifications to the proposed treatment of such resources.

To the extent that the certain parties are concerned that only new intermittent resources would be eligible for the ISO's proposed treatment, the ISO reminds such parties and the Commission that Amendment No. 42 specifically provides that any otherwise Eligible Intermittent Resource, regardless of when built or first on-line, is eligible to be a Participating Intermittent Resource, so long as it meets applicable requirements, including among other things, that such a resource not be under an Existing Contract or other form of a pre-existing power purchase agreement.

The ISO has proposed, consistent with the settlement of uninstructed deviations by Scheduling Coordinators for any type of non-intermittent resources generating units, that costs or credits for uninstructed deviations be allocated amongst all Scheduling Coordinators with Net Negative Uninstructed Deviations, *pro rata*, based upon the proportion of each Scheduling Coordinators' accumulated Net Negative Uninstructed Deviations to the sum of all accumulated Net Negative Uninstructed Deviations over the month. Thus, the only difference between settlement of uninstructed deviations for Participating Intermittent Resources and those by other types of generating units is the summation of such deviations across the month, to account for intermittent resources' lack of operational certainty due to environmental conditions. The proposed design is neither designed nor expected to create any subsidy for settlement of Uninstructed Imbalance Energy by Participating Intermittent Resources.

Lastly, as was suggested by several parties, and initially proposed in Amendment No. 42, the ISO will monitor the program for Eligible and

Participating Intermittent Resources and re-news its pledge to file an update and request additional modifications as appropriate based after garnering experience over the ensuing months.

Representatives of intermittent renewable resources believe that the risk mitigation provided in the ISO's instant proposal is necessary to secure financing for new projects. See, e.g., AWEA at 6. The value of the ISO's proposal in supporting the acquisition of such financing would be diminished if the Commission were to require that the program be adopted only on an interim basis, as proposed by Reliant. Reliant at 21-22. On the other hand, the ISO has no objection to Reliant's suggestion that the ISO provide a report to the Commission detailing the performance of the proposed program after 16 months of the Commission's adoption of the program.

In summary, the ISO believes that the overwhelming support for its intermittent resources proposal as set forth in Amendment No. 42 provide additional reason, above and beyond the intrinsic merits of the proposal itself, for the Commission to promptly approve all aspects of the ISO's proposed treatment of intermittent resources.

C. The ISO Proposal to Amend the Allocation Methodology For Charge Type 487 Is Consistent with Commission Principles Of Charge-Allocation Based Upon Cost-Causation

Several parties agreed that the ISO's proposed allocation of Instructed Energy procurement costs under Charge Type 487, in certain defined circumstances, to all Scheduling Coordinators based on their *pro rata* share of system metered demand, satisfies cost-causation principles and benefits the

entire ISO Controlled Grid. IEP at 4, 10-11; Mirant at 17-18. Alternatively, certain other parties argue that the ISO's Charge Type 487 proposal violates cost-causation principles by allocating procurement costs to entities that did not create the need for such procurement. Cities/M-S-R at 8-10; SCE at 7 n.11; TANC at 6-7; Vernon at 4-5. The ISO responds by noting that each of these parties fails to acknowledge that the ISO's procurement of such Energy benefits the entire ISO Controlled Grid by balancing supply and Demand, thus enhancing reliability for all entities using the grid. Thus, the ISO's proposal is fully in accordance with cost-causation principles. *Cf., e.g., California Independent System Operator Corporation*, 91 FERC ¶ 61,256, at 61,897 (2000) (approving the Demand Relief Program described in Amendment No. 28 to the ISO Tariff in relevant part because of Commission's finding that "maintenance of grid reliability benefits *all* loads that rely on the ISO Controlled Grid and, therefore, that allocation of program costs on a system-wide basis (*i.e.*, to all Scheduling Coordinators) is reasonable").

The CEOB, while agreeing that it is unfair to charge negative deviations for all procured Instructed Energy when those amounts exceed the identified negative deviations, nevertheless expresses the concern that the ISO's Charge Type 487 proposal "may encourage resources to withhold energy and thereby force the CAISO to accept higher priced bids." CEOB at 5. However, the Commission has required that all utilities that own or control generation in California (with the exception of hydroelectric facilities), and that sell through the ISO markets or use the ISO's Controlled Grid, must offer the ISO all of their

capacity in real time during all hours if it is available and not already scheduled to run. See *San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent System Operator and the California Power Exchange*, 95 FERC ¶ 61,418, at 62,551-54 (2001).

Thus, the “must-offer obligation” prevents resources from withholding Energy as described by the CEOB. Therefore, the CEOB’s concern is unfounded in that, even if entities engage in such behavior, both the ISO and Commission can and would seek appropriate compliance and enforcement measures.

The ISO’s proposal for Charge Type 487 does not insulate generators with negative deviations from the full cost of replacement Energy, as represented by the costs of above-Market Clearing Price purchases. If the ISO pays higher prices, then correspondingly higher charges are imposed. Such an outcome properly aligns incentives.

Finally, Duke argues that the Commission should not approve the Charge Type 487 proposal until the ISO has clarified that it is calculating Charge Type 487 charges “in accordance with the Commission’s December 19 Compliance Filings Order rejecting ‘the lesser of bid or proxy price’ approach to calculating the mitigated MCP.” Duke Energy at 4-6. The ISO now states that it is calculating Charge Type 487 charges in accordance with the Commission’s directives.

In sum, given the lack of accurate concerns expressed over the ISO’s proposal to amend the allocation of Charge Type 487 and the need for the ISO to

move ever-closer to cost-causation-based settlement procedures, the ISO urges the Commission to adopt the instant proposal as filed in Amendment No. 42.

D. The ISO's Proposed Intra-zonal Congestion Management Solution Is Compensatory, Necessary, And Consistent With its Forthcoming Comprehensive Management Redesign and Solutions Used By Other ISOs

The comments and protests to the ISO's proposed interim intra-zonal congestion management plan ("AZCM") can be summarized into four basic themes. First, certain parties assert that because the ISO has been directed to file, by May 1, 2002, a comprehensive congestion management design, the instant proposal is piecemeal and premature. Secondly, parties variously allege that the authority sought by the ISO is not consistent with that granted by the Commission to other independent system operators and jurisdictional entities. Thirdly, parties protest that the ISO has not proposed a market-based solution to the problem of AZCM. Fourth and lastly, some parties allege that the ISO's proposal to mitigate bids to the resource's proxy price fails to ensure that the resource will recover its costs. The ISO addresses below each of the four general protests.

1. Elements of the ISO's proposal are interim but necessary to deal with the growing problem while being consistent with the ISO's long-term planning

Parties protest that the ISO's proposal is piecemeal and premature, given the Commission's mandate that the ISO file a plan for a new congestion management design and a Day-Ahead energy market by May 1, 2002. Duke at 2, 7-10; IEP at 5-9; Mirant at 5-12; Reliant at 5-13; Williams at 4. The ISO has

made clear from the beginning that the instant filing proposes only interim measures to limit forward schedules of generators to prevent those generators from overloading transmission facilities and profiting from that situation through unreasonable offers to reduce their output in real time. On the other hand, the ISO has circulated its staff proposal for a permanent solution, which is to move to a nodal congestion management model. The ISO expects, however, that the transition to a permanent solution, once approved, will take over a year. It is patently unreasonable to require the ISO to endure the growing problem of generators exercising of local market power until a permanent solution can be proposed to the Commission, adopted and then fully implemented. Critically, the instant proposed measures are fully consistent with and will be incorporated into the comprehensive congestion management strategy the ISO will file with the Commission in the next several months.

Moreover, Duke's suggestion⁵ that the ISO be required to follow Tariff procedures and simply create a new congestion zone will serve only to perpetuate an old paradigm the ISO has already announced its intent to abandon and is unreasonable, given the set deadlines for known transition to new and comprehensive plans. In sum, the Commission has directed the ISO to reform its congestion management system and the ISO is moving towards compliance therewith: first by proposing appropriate interim measures that are suitable to helping the ISO manage AZCM in the near term and by including the salient features of the instant proposed plan into the longer term comprehensive design

⁵ Duke at 8.

to be filed in the next several months. To withhold the interim relief the ISO seeks until a permanent solution is implemented would serve no purpose other than to deny to the ISO reasonable tools to combat a serious and growing problem of local market power abuse. If any party needs evidence that this is a serious problem, they need look no further than the \$8 million settlement with AES Alamosa, L.L.C., AES Huntington Beach, L.L.C., and Williams Energy Marketing and Trading Company.⁶

As the Commission is well aware, every ISO requires the ability to limit schedules so as to keep facilities operating within their ratings. PJM does this through security-constrained economic dispatch.⁷ The ISO's proposal similarly accomplishes the same thing: it limits schedules to prevent overloading facilities. The ISO proposes to allocate those limits in the forward markets on the basis of a unit's cost. PJM similarly allocates those limits based on economics, but, critically, *caps a resource's bid when that unit is required to ensure local reliability*. That is:

“[e]xcept as specified below, if, at any time, it is determined by the Office of Interconnection....that any generation resource may be dispatched out of economic merit order to maintain system reliability as a result of limits on transmission capability, the prices for energy offered by such resource shall be capped at the levels specified below.”

PJM Interconnection, L.L.C. FERC Electric Tariff at 250.

⁶ *Order Approving Stipulation and Consent Agreement*, 95 FERC ¶ 61, 167 (2001).

⁷ “The Office of the Interconnection shall schedule and dispatch in real-time generation economically on the basis of least-cost security-constrained dispatch....” PJM Interconnection, L.L.C. FERC Electric Tariff at 205. Additionally, “The Office of the Interconnection shall adjust the output of pool-scheduled resource increments as necessary: (a) to maintain reliability . . .” *Id.* at 225.

M-S-R asserts that the ISO should not use a methodology for forecasting intra-zonal congestion until any such methodology is subjected to Market Participant review. MSR at 10. The ISO will be presenting additional detail on the forecast model in the technical standard to be posted on the ISO Home Page. Moreover, the intra-zonal problems currently plaguing the ISO are mostly problems created by too much generation trying to “get out” of an area, often an area that is radially connected to the grid. Given the relative simplicity of the localized area’s transmission infrastructure, the ISO will be able to use highly accurate forecasting tools to significant advantage and be able to statistically accurately predict how much of that local load will offset the local generation. That will allow the ISO to establish realistic and accurate limits for the generation within that area.

MWD argues that the ISO would be precluded from limiting a generator’s Schedule if that Schedule was submitted pursuant to an Existing Transmission Contract (“ETC”) right. MWD at 7. The ISO agrees that such generator Schedules should be given priority in accordance with the instructions provided to the ISO regarding those ETC rights. The ISO does note, however, that such schedules may be curtailed if the transmission capacity is curtailed, not due to congestion, but due to the transmission capacity being derated.

WPTF holds that the ISO’s proposed method for allocating scheduling limits could create negative limits in which a generator would be required to serve as a load. WPTF at 12-13. While WPTF’s observation regarding the potential creation of negative limits is correct, its conclusion is not. WPTF’s conclusion is

wrong because, while there is no explicit lower bound on the ISO's method, the ISO clearly understands that generators cannot be expected to operate below their minimum operating levels, and so such minimum operating levels serve as implicit lower bounds on the ISO's scheduling limits.

WPTF also notes that the ISO's method fails to account for network loops which complicate analyzing the power flow across interfaces and make some generators more effective than others in eliminating the congestion. WPTF at 9. The ISO agrees that the simple interim method it proposes does not account for these factors *per se*. However, as noted *supra*, the intra-zonal congestion problems the ISO experiences are usually created by power from a small number of generators trying to get out of a small area, typically an area radially connected to the ISO grid. As such, each generator has the same effectiveness as all other generators in that area. Such simplifying assumptions, needed only in the interim, can and will be discarded when the ISO moves to a full nodal congestion management model. Until such time, the ISO stresses that generators will not be disadvantaged one to another by the instant proposed solution.

As shown in the transmittal letter for Amendment No. 42. The frequency and costs of intra-zonal congestion are increasing. January 31, 2002 Amendment No. 42 Transmittal Letter at 10, 12. This increased intra-zonal congestion is the result of new generation coming on-line in California – a goal shared by all, including the Commission. However, this generation is coming on-line faster than the transmission infrastructure can be upgraded to accommodate

the new generators' desire to provide power under off-peak as well as peak conditions. Without the interim ability to limit forward Scheduled, California and the ISO face this dilemma: to slow the development of much-needed new generation or to accept local congestion, which in turn invites the exercise of market power.

While it is correct that the ISO seeks the ability to limit forward schedules as described in Amendment No. 42 only until its congestion management system is developed and ultimately adopted by the Commission, the ISO does seek permanent authority to mitigate bids for units than can exercise locational market power. This distinction is critical. Should the Commission decide not to grant the ISO the authority to limit forward Schedules, the Commission must grant the ISO the ability to mitigate bids for units that are required to operate for reliability, just as the Commission has already granted to other independent system operators. As noted in the ISO's transmittal letter for Amendment No. 42, the ability to exercise locational market power, as well as the need to cap bids to mitigate that market power, in a feature common to all power systems and, as such, transcends different congestion management designs. Furthermore, this permanent authority is completely consistent with the authority the Commission granted to other ISOs.

2. The ISO's proposal is consistent with the authority the Commission has already granted other ISOs

Mirant argues that the authority the ISO seeks is not consistent with authority the Commission granted to other ISOs since the ISO seeks authority

related to managing congestion, while the Commission granted, e.g., authority to PJM, related to ensuring reliability. Mirant at 10. Mirant's argument rests on establishing a semantic difference between *congestion* and *reliability*.

Congestion occurs when more parties try to move Energy across a facility than the facility is capable of handling. No party reasonably could argue that an overloaded (i.e. congested) transmission line, left uncorrected, is *not* a reliability problem. If there are a sufficient number of independent parties trying to move Energy across that facility, market theory holds that the parties can express their desire to move their Energy across that facility – or, correspondingly, their willingness to forego moving their Energy – through bids in a competitive process. To discipline bids and prevent the exercise of market power, the process must be competitive, *i.e.*, the process must ensure that no single participant can influence the outcome of the auction to move Energy across the facility through an unreasonable bid.

Where there is a competitive market to mitigate congestion, there is little danger, absent collusion, that the congestion will turn into a reliability problem or a market power problem, since the presumption is that the competition will achieve a reasonable outcome and the Energy transfer across the facility will be properly and economically reduced. Where there is no competitive market, there are two solutions. First, generator(s) that can mitigate the problem can seek to extract market power prices in exchange for operating to ensure reliability. Second, those generators can have their market power mitigated through regulation or contract. Generators so mitigated need not be completely cut off

from the market, but they must be completely cut off from the opportunity to influence the market. The first solution is not acceptable. The second solution, which is embodied in the ISO's proposal, entails a reasonable approach to ensuring a generator can reap the benefits of a clearing-price market without unduly leveraging the outcome of that market through market power. Clearly the second approach, the ISO's approach, is superior and must be adopted. Since, as the ISO will demonstrate below, there is no competitive market to resolve intra-zonal congestion, the only reasonable approach to this problem is the approach taken by the ISO and other ISOs.

3. There is no market-based solution for the problem of locational market power

Various parties assert that the ISO has failed to develop a market-based solution to the problem. Williams at 21-24; WPTF at 16-17. The ISO agrees, because, simply stated, there *is no market for*, and therefore *no possible market solution to*, this problem. Intra-zonal congestion gives rise to opportunities for abusive exercise of market power because a specific unit or set of units is required to operate, or not operate, under certain circumstances and this arises completely and unavoidably from the fact that there are only a few units – usually under the control of one or two owners - that can operate to ensure the reliability of a particular location on the grid. If there were a functioning market, other units could substitute one for another and there would be resulting just and competitive prices to protect consumers.

In its March 22, 2001 “Comments of the California Independent System Operator on Staff Recommendation on Prospective Market Monitoring and Mitigation for the California Wholesale Electric Power Market”, the ISO, citing a Department of Energy study, explained that no competitive market for intra-zonal congestion exists:

“[t]he problems presented by the potential exercise of locational market power were described in a study by the Department of Energy:

‘Electricity markets are dynamic and can change dramatically over the course of just a few hours, creating opportunities to exercise market power even though the market may be very competitive under most circumstances. For example, the geographic scope of the electricity market is determined by the transmission system. Any change in available transmission capacity can quickly alter the geographic boundaries of the market. To cite another example, certain plants may be required to run at certain times in order to meet reliability needs, effectively giving them market power during those periods, because no other plants can act as substitutes.’⁸

Within the ISO system, locational market power arises because of local transmission constraints, which generally occur along transmission paths entering areas of dense population and hence high load. These constraints require the services of specific generation resources to ensure the reliability of the grid in these areas, and in practically all such situations there is not a workably competitive market to provide such services. As a result, the resources that are needed to ensure local reliability are in a position to exercise locational market power -- mitigation is therefore essential.

The Commission Staff has recognized the locational market power issue, and stated “it is important to note that the presence of transmission constraints can redefine the market so as to affect both concentration and market share.”⁹

⁸ Horizontal Market Power in Restructured Electricity Markets, Office of Economic, Electricity and Natural Gas Analysis, U.S. Department of Energy, March 2000 at 2.

⁹ Staff’s Recommendation on Prospective Market Monitoring and Mitigation for the California Wholesale Electric Power Market dated March 2001 at 11.

The ISO does have certain existing measures to mitigate the exercise of locational market power (*i.e.*, Reliability Must-Run Contracts), these measure do not provide complete protection from the exercise of locational market power. The ISO notes that the Commission has approved locational market power mitigation programs for the Eastern independent system operators that are more expansive than that available in California. For example, in PJM, generators dispatched out of merit order because of transmission constraints are subject to mitigation. *See, e.g., Atlantic City Electric Co. et al.*,⁸⁶ FERC ¶ 61,248 at 61,893, 61,898 (1999). Similarly, in ISO New England, out of merit dispatch is flagged and subject to several screens before payment.¹⁰ The New York ISO Tariff also has provisions for addressing locational market power. *See* NYISO Services Tariff § 2.97 “Locational Based Marginal Pricing.” Failure to adopt a similar measure (*i.e.*, that incorporated in the ISO Plan) with respect to California is inappropriate.”

In sum, the protestors’ request for the ISO to develop a market to deal with local congestion ignores the oft-repeated fact that *there is no competitive market for local congestion*. The protestors are requesting the ISO to create a market in which the commodity is market power. This the Commission must reject.

4. The ISO’s proposal to mitigate bids is consistent with the price mitigation plan imposed by the Commission and thereby is compensatory

Some parties protest that the ISO’s proposal to mitigate bids to the unit’s proxy price does not ensure the unit will recover its costs. Dynegy at 4-9; IEP at 5-9. San Francisco counters that the ISO’s proposal will create undue

¹⁰ See New England Power Pool’s (“NEPOOL’s”) April 5, 2000 submittal in Docket No. ER00-1874 of an amended Market Rule 17, “Market Monitoring and Market Power Mitigation”, at 9. NEPOOL’s submittal was accepted for filing by letter order issued May 31, 2000. 91 FERC ¶ 61,193 (2000).

enrichment since a generator could earn more than the cost-based rates applied to generators operating in accordance with their Reliability Must-Run (“RMR”) contracts. San Francisco at 3-5. Moreover, San Francisco argues that the ISO’s proposal should not include the ten percent credit risk adder the Commission ordered the ISO to pay to generators for all sales in its markets. *Id.*¹¹

The ISO’s proposal to mitigate bids to the proxy price is compensatory. The Commission has already deemed it to be compensatory by directing the ISO to implement *exactly* the same approach as part of its mitigation plan for California. The Commission directed that during reserve deficiency periods (i.e., when the opportunity to exercise market power is the greatest), the ISO should replace each must-offer resource’s market bid with a bid that is the product of the unit’s incremental heat rate and the proxy figure for natural gas costs and a \$6.00/MWh adder for variable operations and maintenance costs. The Commission also directed that the market clearing price for each BEEP Interval during reserve deficiency periods shall be established by the highest proxy price of each unit dispatched during that interval. The Commission’s approach is both reasoned and reasonable. While generators must bid at a level representing their marginal costs, they may earn a price higher than that. Moreover, generators cannot set a market clearing price higher than their marginal costs. The ISO’s proposal to mitigate bids to the unit’s proxy price the unit is required to

¹¹ “We instruct the ISO to add ten percent to the market clearing price paid to generators for all prospective sales in its markets to reflect credit uncertainty.” June 19, 2001 Order on Rehearing of Monitoring and Mitigation Plan for the California Wholesale Electric Markets, Establishing West-Wide Mitigation and Establishing Settlement Conference. 95 FERC ¶ 61, 418 (“June 19 Order”). The Commission confirmed this adder in its December 19, 2001 “Order on Clarification and Rehearing,” 97 FERC ¶ 61,275 (“December 19 Order”).

operate to ensure local reliability is at least as compensatory as the Commission's mitigation plan. Just as the Commission's plan does not allow generators to exercise the market power inherent during reserve deficiencies but does allow generators to earn a higher market clearing price, the ISO's plan similarly does not allow generators to exercise the market power inherent in being the only unit, or one of only a few units, required to operate to ensure the reliability of part of the grid, but does allow generators to earn a higher market clearing price. Furthermore, the ISO's proposal to pay generators the higher of their proxy bid price or the market clearing price (which, if the ISO is not undergoing a reserve deficiency at the time, will not be set by proxy bids, so may be higher than a market clearing price established by proxy bids) guarantees that a unit will recover its costs or better.

Dynegy protests that the proxy price should be established by average heat rate and not by incremental heat rate. This is simply a collateral attack on the principle of establishing prices by incremental instead of average heat rate established by the Commission¹² and affirmed by Commission Staff.¹³

San Francisco's concern that the proxy prices will lead to charges above the cost-based RMR rates is unfounded. The ISO will dispatch RMR units at cost-based RMR contract rates to mitigate local reliability as provided for in the RMR contract. Since every generating that is not a Qualifying Facility on the San

¹² "[T]he ISO will be able to approximate the actual incremental cost curve of each generating unit and thereby develop representative proxy prices for each unit throughout the unit's operating range." June 19 Order slip op at 33. "The ISO's proposal to include the minimum and maximum operating levels for each unit and nine points in between is reasonable." *Id.*

¹³ Exhibit No. S-26, Prepared Rebuttal Testimony of John K. Sammon, witness for the staff of the Federal Energy Regulatory Commission, at 54.

Francisco peninsula is under an RMR contract, San Francisco will continue to pay only cost based rates for energy needed to ensure local reliability that is dispatched out of merit order.

PG&E and WPTF note that the ISO's proposal to use thermal proxy bids does not properly consider hydroelectric generation. PG&E at 4; WPTF at 3-17. The ISO notes that while the Commission excluded hydroelectric generation from the must-offer obligation, thereby avoiding the question of what sort of proxy bid a hydroelectric generator must submit to the ISO, the Commission did rule that hydroelectric generation must be a price taker (*i.e.*, bid \$0/MWh) in the ISO's markets.¹⁴ Under the ISO's proposal, hydroelectric generation will receive the greater of its proxy bid (\$0) or the market clearing price – a result again completely consistent with Commission direction.

Duke protests that negative decremental bids do not represent the exercise of market power but are instead a means to reflect certain costs, e.g. the cost of excessive wear and tear or the cost of gas imbalance penalties. Duke clearly dislikes the ISO's ten-minute market, and claims that this market creates a world "where continuously ramping up and backing down over ten-minute intervals exposes the unit to enormous thermal stress." Duke at 9-10. However, the Commission has already factored in a generous \$6.00/MWh variable operations and maintenance rate into the current price mitigation scheme, a rate that must surely compensate generators for wear and tear. Moreover, operational flow orders and emergency flow orders are not everyday gas supply

¹⁴ December 19 Order at 46.

events. Even if they were, generators can still avoid any imbalance penalties if they balance their daily gas portfolios, which they are in a position to be able to do if they control a fleet of generating units.

In sum, the ISO's instant proposal is consistent with other ISOs' treatment of local congestion, the fundamental design inculcated into the ISO's forthcoming comprehensive congestion management design proposal, and reasonable in light of the seriousness of the problem in localized areas of the ISO Controlled Grid. The ISO urges the Commission to grant this critical set of operational tools to help ensure prompt and effective resolution of local congestion problems until such time as a comprehensive plan can be developed, proposed, adopted and fully implemented over the next year or more.

E. The Target Price and Uninstructed Deviation Proposal Is Reasonable and Consistent with Measures In Place In Other ISOs

The CEOB and CPUC support adoption of the ISO's proposed changes to its Target Price methodology, with the CPUC noting that the proposal includes straightforward measures to address well-known gaming opportunities and is consistent with measures that the Commission has approved for other independent system operators, including PJM. CEOB at 7; CPUC at 2.

Duke and IEP assert that the ISO should be required to wait, at least until it files a comprehensive market redesign proposal and the Commission acts on such a filing, to gain additional tools for managing problems with Target Price and unreasonable INC and DEC bids. Duke at 11-12; IEP at 9-10. Duke also asserts that the ISO's ten-minute real time market is the root source of many of

the ISO market problems, and presumably because ten-minute markets are not expressly addressed in the Amendment No. 42 Target Price and Uninstructed Deviation Settlement proposal, both proposals should be rejected. *Id.*

Duke also alleges that the penalty mechanism (referring to the proposed tolerance band) appears inflexible and discriminatory due to a failure to offset generation and load deviations and because the application of the tolerance band to imported Energy is not clear and may result in discrimination between in-state and out-of-state generation resources. Duke at 11-12. Dynegy protests that the tolerance band is either a prohibited penalty or one that fails the Commission's general precedent that such penalties be narrowly tailored. Dynegy, joined by IEP, also protests that the tolerance band, as set forth in proposed Tariff Section 11.2.4.2.1, is too narrow and discriminates against in-state thermal generating units. Dynegy would have the Commission either reject the tolerance band as a guide for assessing additional charges or require the ISO to implement a graduated bandwidth, as is employed by ERCOT. Dynegy at 12-16; IEP at 9-10. Mirant similarly protests the tolerance band is unreasonable but suggests that if the Commission decides to approve the ISO's proposal, it should require the ISO to compensate generators for positive uninstructed deviations outside of the tolerance band at prices that decrease at a reasonable rate as the level of overgeneration increases and impose a surcharge on Energy needed to compensate for negative uninstructed deviations. Mirant at 12-15.

Reliant asserts that the tolerance band methodology should be rejected but that if the Commission does grant the ISO's proposed methodology, after the

termination of the must-offer obligation, then the ISO must include sufficient flexibility for an Scheduling Coordinator to substitute units within its portfolio to stay, *en masse*, within the tolerance band, provide for 5% deviations, instead of 3% and have all aspects of the methodology subject to the Commission's jurisdiction. Reliant at 19-21. Williams similarly supports the aggregation at the portfolio level to satisfy the ISO's Schedule versus operational performance. Williams at 22-23. Williams also would have the ISO permit the tolerance band to be applicable to a single bus aggregation as the sum of the individual unit's maximum operating level ("Pmax"). *Id.*

SCE suggests that the tolerance band be modified to provide that Scheduling changes, made in accordance with the ISO Tariff or provisions in Existing Contracts, to the extent such changes do not cause the ISO to incur an actual Energy obligation, are not uninstructed deviations and not subject to charges as proposed. SCE also requests that the ISO be directed to further explain its tolerance band proposal and, as joined by SMUD, asks that the ISO be prohibited from further modification of its tolerance band proposal absent further Commission (or, in the case of SMUD, also by stakeholder) approval. SCE at 5-9; SMUD at 5-6. SMUD also requests that the ISO clarify that the proposed tolerance band methodology for uninstructed deviations applies only to transactions on the ISO Controlled Grid. *Id.*

Williams asserts that the ISO has improperly proposed a penalty against orders from the Commission denying all such penalty provisions and that to the extent any penalty is approved, Energy produced outside the applicable

tolerance band should receive a sliding percentage of the Market Clearing Price, not the zero-valuation proposed. Williams at 22-23.

Dynegy mistakenly asserts that the ISO did not engage in stakeholder dialogue prior to filing its Target Price and Uninstructed Deviation proposals. Dynegy at 16-17, 23-26. Continuing its protest, Dynegy would have the ISO adopt an allocation method to make the clearing price be the midpoint of the bid and offer rather than the as-bid point. *Id.*

Lastly, Duke suggests that the Commission is an adequate source of policing anti-competitive behavior, such as unjust and unreasonable DEC bids, and therefore the ISO should not have market rules to prevent such abusive market power behavior at the outset. Duke at 10-11.

In response the ISO first will reply to concerns about the tolerance band and secondly to other aspects of the proposed Target Price and Uninstructed Deviation methodologies. As regards the proposed tolerance band and its utility in identifying generating units that are causing excessive costs in Imbalance Energy, the Commission previously has stated

“[a] generator should be able to deliver its scheduled hourly energy with precision. If we were to allow a generator to deviate from its schedule by 1.5% without penalty, as long as it returned the energy in kind at another time, this would discourage good operating practice.”

Order No. 888-A, FERC Statutes and Regulations, ¶ 31,048 at 30,230.

The ISO’s tolerance band proposal fundamentally accords with the Commission’s prior statements and grants of authority to other independent system operators and jurisdictional entities. Moreover, by employing a tolerance

band methodology, the ISO is merely protecting its Market Participants from paying for Energy and services the ISO never requested, does not need and must incur costs for. Under the most basic of Commission principles, entities that cause such costs should bear primary responsibility for paying for such costs.

To the extent that several parties are concerned with proposed Tariff Section 11.2.4.1.2 and the proposal for the ISO to adjust the incentive formula for payments when the tolerance band is violated, the ISO agrees to forego the ability to unilaterally make such adjustments, but to instead file a request with the Commission for any such modification.

As to the several protests that the ISO should be forced to wait, and do without tools to combative the increasing serious problem of Price Overlap and unreasonably high negative DEC bids, the ISO notes the such a notion is self-serving and accomplishes nothing beyond an attempt to grab more time to extract unreasonable prices from ISO Market Participants. The Target Price and Price Overlap proposals are entirely consistent with fundamental Commission principles of allocating costs to those entities creating the costs. Moreover, the proposals set forth in Amendment No. 42 are consistent and in accord with authority granted to other independent system operators and jurisdictional entities. Lastly, the proposed tools are very consistent with earlier proposals by the ISO and fully integrated into the draft comprehensive market design plan now being prepared for filing in the upcoming several months. It makes no sense to force the ISO to enter into the critical summer months when there may be

cascading impacts on reliability from the frequent occurrence of unjust and unreasonable DEC bids without the tools to resolve such problems and protect ISO Market Participants from the exercise of market power and threats to operational control of the grid.

The tolerance band is both narrowly-tailored to serve its purpose while taking into account reasonable operational flexibility and unexpected fluctuations in the functioning of plant equipment as well as other contingencies. Moreover, as detailed in the transmittal letter for Amendment No. 42 at pages 22 –24, the tolerance band is based upon empirical historical data on deviations for generating plants and was enlarged at the express request of stakeholders. The ISO also explained that it is not alone in seeking use of a tolerance band for reducing the problem of uninstructed deviations. As detailed in the transmittal letter to Amendment No. 42 at page 23 and set forth in Table 2 therein, other independent system operators across the country have tolerance bands for uninstructed deviations that range from $\pm 1.5\%$ on a net QSE basis for ERCOT to NYISO's $\pm 3\%$ on an individual resource basis. Table 2 documents how the ISO's proposed tolerance band conforms with those already approved by the Commission for use in other independent system operator corporations throughout the country. It makes no sense for the Commission to deny the ISO use of such an important and commonly accepted tool.

As for Reliant's protest that it should be permitted to employ a portfolio netting for purposes of the Uninstructed Deviation Penalty, the ISO notes, as is detailed at page 21 of the transmittal letter to Amendment No. 42, that it already

has accommodated this eventuality. Specifically, the ISO provided that that “Scheduling Coordinators could aggregate generators interconnected at a single ISO grid bus point for purposes of determination of the Uninstructed Deviation Penalty, thus effectively gaining the ability to net deviations from units located at a single point. The ISO will allow for the net determination of penalties for other aggregations of generating units, as approved by the ISO on a case-specific basis. [FN 17: The ISO will develop a process to allow Market Participants to propose aggregations of generating units that are not at individual transmission bus points. Market Participants proposing unit aggregations will be required to demonstrate that the units aggregated are interchangeable, function as a single entity, and will not affect grid reliability.” Thus Reliant’s protest is without merit inasmuch as the ISO already has proposed a means for portfolio aggregation.

As to charges that the ISO is treating interties differently than in-state generators, the ISO reminds the Commission that interties *are* different: by order of the Commission, absent fulfillment of other conditions, all interties must bid at \$0/MWh into the ISO Real Time Markets, be price-takers and are not eligible to set the Market Clearing Price through the duration of the market power mitigation period. Moreover, interties do not control their ability to comply with ISO Dispatch instructions: that ability is controlled by their own control area operator who may, or more often may not, let interties make intra-hour Schedule changes in accordance with ISO Dispatch instructions issued in ten-minute increments. Under Tariff Section 11.2.4.1.2(b), any intertie bids that fail to comply with ISO real time Dispatch instructions are subject to the Uninstructed Deviation Penalty.

The ISO clarifies that the intent to impose penalties for intertie bid declines of ISO Dispatch instructions is limited to pre-Dispatched intertie bids only, and the interties that fail to comply with intra-hour ISO Dispatch instructions are not subject to an Uninstructed Deviation Penalty. Currently, the ISO, in compliance with Commission orders, only issues ten-minute, intra-hour Dispatch instructions to interties, and the ISO will, as needed, issue reverse Dispatch instructions. Should the intertie fail to comply, it will be settled at the Imbalance Energy Price. This is a consequence of numerous orders in other proceedings before the Commission. The fact that in Amendment No. 42, the ISO is proposing to create a single clearing price, thus making the intertie subject to same price regardless of compliance with the intra-hour Dispatch instruction, is immaterial in light of the fact that the intertie is constrained by a range of Commission requirements that further reduce such resources' options for participation in ISO markets. The ISO urges the Commission to keep in mind that California is dependent upon a significant amount of imported Energy to support in-state Demand.

Moreover, while the ISO has developed a sound, comprehensive and reasonable Target Price methodology that achieves a single price that is of benefit to ISO Market Participants, the confluence of Commission orders means that the instant proposal, in conjunction with other Commission orders, acts differently upon interties compared to in-state generators, because the two types of resources fundamentally are treated differently under Commission orders. This is not a reason to reject the instant proposal, because there is no discrimination between similarly situated entities: only different impacts upon

different kinds of entities, as may be reasonably expected in view of the many market mitigation measures currently in effect. Clearly the ISO, in compliance with forthcoming Commission decisions concerning market power mitigation provisions and the instant Amendment No. 42, will make appropriate proposed modifications to ensure consistency among the several provisions governing participation of intertie resources in ISO markets, Target Price and settlement of uninstructed deviations.

The ISO agrees with SCE that, all other things being equal, Schedule changes within an hour, in accordance with the terms of Existing Contracts, for wheel-throughs, for example, that do not cause the ISO to incur any extra costs, should not be deemed Uninstructed Deviations. SCE at 5-9.

Lastly, the ISO notes that Dynegy incorrectly asserts that the ISO did not provide for stakeholder input in the development of the proposals for Target Price and Uninstructed Deviation methodologies. As is documented in the transmittal letter for Amendment No. 42 at page 22 and in a Market Notice posted by the ISO on February 7, 2002, in further explanation of the proposed Target Price and Uninstructed Deviation methodology, and attached hereto, four (4) stakeholder outreach sessions were held and the ISO made a number of significant changes to the proposal as a direct result of these stakeholder sessions. Dynegy staff participated in at least some, if not all, of these sessions. As the Commission can ascertain for itself from the attached Market Notice, many of the protests that the ISO is answering in the instant filing, were raised, discussed and addressed through a compromise position developed through the stakeholder process.

For all of the above cited reasons, and as is detailed in the attached Market Notice and original Amendment No. 42 as filed, the Commission should promptly approve the ISO's proposal for additional tools to address the serious problem of Target Price, Price Overlap and Uninstructed Deviations as an interim measure that is consistent with other jurisdictional entities and will fit seamlessly into the comprehensive market design plan to be filed in the next several months. The documented scope of the problem is too great to leave the ISO without these critically important tools in the interim.

III. CONCLUSION

For the foregoing reasons, the ISO respectfully requests that the Commission accept Amendment No. 42 without further procedures.

Respectfully submitted,

Charles F. Robinson
Margaret A. Rostker
Counsel for the
California Independent System
Operator Corporation
151 Blue Ravine Road
Folsom, CA 95630
(916) 608-7147

Dated: March 8, 2002

Attachment As Stated

Attachment 1

**ISO Market Notice on Target Price
Dated February 7, 2002**

MARKET NOTICE
February 7, 2002
***ISO Files Proposed Tariff Changes to Target Price and Uninstructed
Deviation Settlement***

Over the past several months, the California Independent System Operator Corporation (“ISO”) has been modifying the process that calculates the Target Price for Real Time Imbalance Energy and settles uninstructed deviation Energy. While initial discussions of the issue date back to May of 1998, the ISO initiated a more concerted effort to resolve the issue beginning in June of 2001. Many of you have participated in Stakeholder meetings and/or Focus Group meetings to share your thoughts, concerns and recommendations for modifying the way Target Price is calculated and uninstructed deviations settled. The ISO considered Market Participant suggestions carefully and, on January 31, 2002 filed proposed Tariff changes reflecting many of your comments. This Market Notice provides details of the Federal Energy Regulatory Commission (“Commission”) filing, which is posted in its entirety on the ISO Home Page and Commission Home Page.

Background

Since its inception, the ISO’s Real Time Imbalance Energy Market has struggled with quantities of bids whose prices overlap (the “Price Overlap”). In a market with real-time trading opportunities, overlapping bids would become mutually beneficial trades between buyers and sellers and the Price Overlap would be eliminated by these trades. The design of the ISO’s Real Time Imbalance Market, however, neither provides opportunity for Scheduling Coordinators to execute such trades, nor permits the ISO to execute trades on behalf of Scheduling Coordinators. Given the ISO’s ten-minute interval market structure, the ISO has determined that the Price Overlap should be eliminated in order to produce a monotonic non-decreasing aggregate Imbalance Energy bid curve. Such a bid curve ensures that each of the ten-minute interval prices are consistent with and reflect the Imbalance Energy requirements in each such interval.

Even while implementation of a single price system and elimination of the Target Price will produce significant benefits, including increased price transparency for Market Participants, the ISO knows that such a single price may increase uninstructed deviations unless sufficient incentives are in place to prevent price chasing. Accordingly, the ISO has worked to modify its treatment of uninstructed deviations. The ISO proposed a draft policy on managing uninstructed deviations at the Market Information Forum (“MIF”) meeting in October 2001 and updated the MIF in November on the ISO’s progress in developing that policy. Subsequently, the ISO conducted a series of focus group meetings with Stakeholders to obtain comments and suggestions. As a result of these activities, the ISO also has filed proposed Tariff modifications to provide for narrowly- tailored explicit penalties to be levied against Scheduling Coordinators

for uninstructed deviations that are beyond a tolerance band for generating unit performance.

Proposed Modification For Clearing the Price Overlap

The ISO has proposed to implement a procedure whereby it will issue Dispatch instructions to all overlapping bids in the Real Time Market, thus allowing bidders to actually buy Energy (i.e., reduce generation) or sell Energy (i.e., increase generation) at the applicable ten-minute price.

Thus, by clearing the Price Overlap for each ten-minute interval, the separate incremental and decremental prices converge to a single Market Clearing Price (“MCP”). As a result, the proposed modifications will simplify ISO real-time pricing by setting a single interval MCP.

Proposed Modifications for Uninstructed Deviations

The proposed modifications specifically are designed to provide to Market Participants flexibility in complying with their Dispatch Operating Point along with reasonable operational flexibility. The ISO proposes to continue to issue unit-specific Dispatch instructions and to continue to settle on a unit-specific basis. However, Scheduling Coordinators may aggregate generators interconnected at a single ISO grid bus point to determine any applicable Uninstructed Deviation Penalty, thus effectively gaining the ability to net deviations from units interconnected at a bus point. The ISO also will permit deviations to be aggregated for other aggregations of generating units, as approved by the ISO on a case-specific basis.¹⁵ Moreover, the ISO’s proposed modifications will allow suppliers to have the flexibility to deviate from their DOP within a tolerance band, without incurring any penalties.

Stakeholder Suggestions and Comments

Through the four focus sessions with Stakeholders the ISO learned that, while there was little disagreement with the need to eliminate the Target Price, there were concerns about maintaining operational flexibility for Scheduling Coordinators, providing for load following, and the size of the tolerance band. As a result of Stakeholder suggestions, the ISO modified its proposal in significant ways.

¹⁵ The ISO will develop a process to allow Market Participants to propose aggregations of generating units that are not at individual transmission bus points. Market Participants proposing unit aggregations will be required to demonstrate that the units aggregated are interchangeable, function as a single entity, and will not affect grid reliability.

Basis for Settling Uninstructed Deviations

The ISO originally proposed that Scheduling Coordinators continue to schedule each generating unit for Dispatch on a unit-level basis and that all deviations be calculated and penalties assessed on this same basis. The ISO proposed this approach to allow it to maintain sufficient control to insure system reliability. Stakeholders were concerned, however, that this approach was too inflexible, would limit Scheduling Coordinators' ability to manage their portfolios and would result in substantial penalties. In response to these concerns, the ISO revised its proposal such that, while Market Participants would still schedule units individually, the ISO will continue to issue unit-specific Dispatch instructions, the ISO will settle on a unit-level basis, and the ISO will assess Uninstructed Deviation Penalties on a bus-level basis. Penalties will be assessed on the net deviation of all units operated by a Scheduling Coordinator at each bus in the case of multiple units connected to a single bus, or the net deviation at a single bus where the unit's output is metered by a single net meter. The ISO will also allow for a net determination of penalties for other aggregations of generating units, as approved by the ISO case-specific.

Provision for Load Following

The original ISO proposal would have resulted in deviation charges to units that were following load if the load following caused substantive changes in generation output. Net metering customers also raised this concern. The proposal that the ISO filed with the Commission gives vertically integrated entities and net metering Scheduling Coordinators that become Metered Sub-System ("MSS") Market Participants the ability to follow load without penalty. For MSS entities, deviations will only be calculated for changes to the net interchange in the ISO grid.

Tolerance Band

The ISO based its original recommendation on empirical historical deviations, but many Stakeholders felt the original proposal was too restrictive and, given the no-pay provision for positive deviations above the dead band, would encourage risk-adverse generators to bias generation downward. The ISO reviewed what it believed to be a manageable level of deviation and has proposed to expand the proposed dead band from the greater of +/-3 MW or +/-3 % of expected energy to the greater of +/-5 MW or +/- 3% of the resource¹⁶ Pmax.

Table 1, posted on the ISO web site at

<http://www.caiso.com/docs/2000/06/12/200006121229457917.html> under the heading "Uninstructed Deviation Pricing Focus Groups," summarizes the original

¹⁶ "Resource" in this instance may be defined as the aggregated units, net expected generation for MSS, delivered Regulation range or scheduled load for PLA.

and final proposals and includes three examples to illustrate the operation and impact on Market Participants of the ISO's proposed Uninstructed Deviation Penalty.

- Example 1 illustrates the difference between implementing deviations on a unit-level v. bus-level of aggregation;
- Example 2 represents the impact of penalties on Metering Sub-System Market Participants; and
- Example 3 illustrates how the revised methodology will apply to GMMs.

The ISO thanks all of those Stakeholders whose expertise, suggestions and comments helped produce the proposed Tariff revisions that will better serve both the ISO and Market Participants.

If you have questions or would like additional information, please contact your Account Manager.

Client Relations Communications
CRCcommunications@caiso.com

Operational Considerations

Issue	Original Recommendation	Final Recommendation
ISO Dispatch Instructions	<ul style="list-style-type: none"> • Unit specific; • “go-to” instruction provided 	<ul style="list-style-type: none"> • Unit specific; • Provide “go-to” and incremental instruction (all instructions the later of HA schedule or ISO instruction)
Dead-band	<ul style="list-style-type: none"> • Greater of 3 MW or +/- 3% of expected generation 	<ul style="list-style-type: none"> • Greater of 5 MW or +/- 3% of unit maximum capability (Pmax) from MSS, bus generation or Unit, as applicable.

Settlement Considerations

MCP	<ul style="list-style-type: none"> • Single Price (Target Price) 	<ul style="list-style-type: none"> • Single Price (Target Price)
Settlement Interval	<ul style="list-style-type: none"> • 10-minute 	<ul style="list-style-type: none"> • 10-minute
Settlement of Deviations	<ul style="list-style-type: none"> • Unit Specific 	<ul style="list-style-type: none"> • Bus-level or ISO-approved resource aggregation; • Unit specific for all others
Pay for deviations w/in dead-band	<ul style="list-style-type: none"> • Over-generation - 100% of MCP; • Under-generation - charged 100% of MCP 	<ul style="list-style-type: none"> • Over-generation – 100% of MCP; • Under-generation – charged 100% of MCP
Positive Deviations	<ul style="list-style-type: none"> • No Pay for deviations above dead-band 	<ul style="list-style-type: none"> • No Pay for deviations above dead-band
Negative Deviations	<ul style="list-style-type: none"> • Charge MCP below dead-band + 25% of interval MCP 	<ul style="list-style-type: none"> • Charge MCP below dead-band + 25% of interval MCP
Section 487 Charges	<ul style="list-style-type: none"> • Offset <i>if</i> physical incapability to deliver is reported to ISO <i>and</i> SC has bids in ISO market equal to neg. deviation MW 	<ul style="list-style-type: none"> • Offset <i>if</i>: • Physical incapability to deliver is reported to ISO, <i>and</i> • SC has bids in ISO market equal to neg. deviation MW, <i>and</i> • Bid is below NECPL
Staged		<ul style="list-style-type: none"> • Only Amendment 33 penalties will

Emergencies		apply
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Applicability

Accommodation of MSS, self-served loads	<ul style="list-style-type: none"> To be determined as part of ongoing market participant discussions 	<ul style="list-style-type: none"> MSS and self-providing SCs (load and gen. @ same ISO grid point) allowed to load follow; Deviations only measured on net ISO expected energy deliveries
Accommodation of regulation, constrained resources, regulatory must run generation	<ul style="list-style-type: none"> Units "constrained on" or providing regulation to be accommodated 	<ul style="list-style-type: none"> Units providing regulation will be exempt for the total MW they may provide regulation for Units "constrained on" due to minimum operating requirements will be exempt only for the minimum operating period Regulatory Must Run Generation exempt while unit is operating and RMRG Losses based on GMM
Participating Load Resources		<ul style="list-style-type: none"> Greater of 5 MW or +/- 3% of scheduled load
Qualifying Facilities		<ul style="list-style-type: none"> (Consistent with ISO QF policy)
Intermittent Resources		<ul style="list-style-type: none"> Consistent with ISO Intermittent Resource policy
Inter-tie Transactions		<ul style="list-style-type: none"> Exempt, unless resource is dynamically scheduled or Instruction Declined
Energy Testing		<ul style="list-style-type: none"> Exempt from deviation penalty so long testing is coordinated

Example 1: Unit versus Bus-level Uninstructed Deviation Penalty Assessment

Assumptions:

- Participant Schedules Generation at unit-level
- Changes in net generation delivered to ISO system are subject to Uninstructed Deviation charges. Participant can not net generation with other generation metered at different bus

Unit Level	Bus-level
<p>Forward Schedule: Gen 1 = 140 MW of 160 MW Pmax Gen 2 = 140 MW of 160 MW Pmax Gen 3 = 120 MW of 180 MW Pmax</p> <p>Real-time: Gen. 1 increases 20 MW = 160 MW Gen. 2 decreases 20 MW = 120 MW</p> <p>Result: Gen. 1 deviation = +20 MW. No payment for 15 MW Gen. 2 deviation = -20 MW. Charged MCP for 20 MW + penalty of MCP*.25) for 15 MW</p>	<p>Forward Schedule: Gen 1 = 140 MW of 160 MW Pmax Gen 2 = 140 MW of 160 MW Pmax Gen 3 = 120 MW of 180 MW Pmax</p> <p>Real-time: Gen. 1 increases 20 MW = 160 MW Gen. 2 decreases 20 MW = 120 MW</p> <p>Result: Gen. 1 paid MCP * 20 MW Gen. 2 charged MCP * 20 MW No deviation charges or penalties applied</p>

**Example 2: MSS with Load and Generation Metered at Same Bus
Uninstructed Deviation Penalty Assessment**

Assumptions:

- SS schedules Load and Generation
- MSS could load-follow without incurring Uninstructed Deviation Charges
- Increase generation in response to increase in own-load at same metered bus
- Decrease generation in response to decrease in own-load at same metered bus
- Changes in net generation delivered to ISO subject to Uninstructed Deviation charges

<p>Forward Schedule: Load = 100 MW Gen. = 100 MW Net Scheduled Delivery = 0 MW. Where load is within MSS.</p> <p>Real-time: Load increases 20 MW = 120 MW Gen. Increases 20 MW = 120 MW Result:</p> <ul style="list-style-type: none"> • Increase in load offset by increase in generation • Same net generation delivered to grid <p>NO UNINSTRUCTED DEVIATION</p>	<p>Forward Schedule: Load = 100 MW Gen. = 100 MW Net Scheduled Delivery = 0 MW. Where load is within MSS.</p> <p>Real-time: Load increases 20 MW = 120 MW Gen. Increases 10 MW = 110 MW Result:</p> <ul style="list-style-type: none"> • Increase in load only partially offset by increase in generation • Net gen. delivered to grid decreases by 10 MW. <p>Charged MCP for 10 MW + penalty of (MCP*.25) for 5 MW</p>
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Example 3 – Application of GMMs

Current Approach	Revised Approach
<p>Scheduling Coordinator schedules 100 Mw from a 150 MW generator within the ISO Controlled Grid. HA GMM is 0.95 If SC generates 100 Mw:</p> <ul style="list-style-type: none"> • Delivery will be 100 Mw X 0.95 = 95 Mw • SC assessed Uninstructed Deviation of 5 	<p>Scheduling Coordinator schedules 100 Mw from a 150 MW generator within the ISO Controlled Grid. HA GMM is 0.95 If SC generates 100 Mw:</p> <ul style="list-style-type: none"> • Delivery will be 100 Mw X 0.95 = 95 Mw • SC assessed 5 Mw charge at the



<p>Mw charged at inc price</p> <p>If SC generates 105.26 Mw:</p> <ul style="list-style-type: none">• Delivery will be 105.26 Mw X 0.95 = 100 Mw• No Uninstructed Deviation <p>If SC generates 108 Mw:</p> <ul style="list-style-type: none">• Delivery will be 108 Mw X 0.95 = 103 Mw• Uninstructed deviation of 3 Mw paid at dec price	<p>replacement cost of energy (MCP).</p> <ul style="list-style-type: none">• No additional deviation penalty will be assessed because deviation is within 5 MW dead-band. <p>If SC generates 105.26 Mw:</p> <ul style="list-style-type: none">• Delivery will be 105.26 Mw X 0.95 = 100 Mw• No Uninstructed Deviation <p>If SC generates 108 Mw:</p> <ul style="list-style-type: none">• Delivery will be 108 Mw X 0.95 = 102.6 Mw• Uninstructed deviation of 2.6 MW that will be paid the single MCP.• No deviation penalty will be assessed because deviation is less than 5 MW
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March 8, 2002

The Honorable Magalie Roman Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: California Independent System) Docket No. ER02-922-000
Operator Corporation)

Dear Secretary Salas:

Enclosed for electronic filing please find the Answer of The California Independent System Operator Corporation To Joint Motion For Technical Conference, Motions to Intervene and Reject, Requests for Suspension, Hearing, and Modification, Comments and Protests in the above-captioned docket.

Thank you for your assistance in this matter.

Respectfully submitted,

Margaret A. Rostker
Counsel for the California Independent
System Operator Corporation
151 Blue Ravine Road
Folsom, CA 95630
(916) 608-7147

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the Answer of The California Independent System Operator Corporation to Joint Motion For Technical Conference, Motions to Intervene and Reject, Requests for Suspension, Hearing and Modifications, Comments and Protests upon each person designated on the official service list compiled by the Secretary in the above-captioned docket.

Dated at Folsom, California, on this 8th day of March, 2002.

Margaret A. Rostker
Counsel for The California Independent
System Operator Corporation
151 Blue Ravine Road
Folsom, CA 95630