

103 FERC ¶ 61, 265
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;
William L. Massey, and Nora Mead Brownell

California Independent System Operator Corp. Docket No. ER03-683-000

ORDER ON PROPOSED TARIFF AMENDMENT NO. 50

(Issued May 30, 2003)

1. On March 31, 2003, the California Independent System Operator Corporation (CAISO) filed Amendment No. 50 to its open access transmission tariff (tariff) to provide the CAISO with a revised method for managing intra-zonal congestion and permit the CAISO to share generator outage information with entities operating transmission and distribution systems affected by the outage. The CAISO states that this amendment provides an interim solution until it implements Locational Marginal Pricing (LMP) or some other long-term comprehensive congestion management solution. As discussed below, we accept Amendment No. 50, subject to modification, effective May 30, 2003.
2. This order benefits customers by approving a market power mitigation measure, on an interim basis, as well as information sharing provisions that will enhance electricity reliability and help provide power at just and reasonable rates.

BACKGROUND

3. The CAISO states that Amendment No. 50 is necessary for two primary reasons: (1) because it has no procedure for managing intra-zonal congestion in forward markets and (2) to address issues of local market power. The CAISO states that under its current tariff provisions, it must resolve intra-zonal congestion in real time which places undue burdens on its real-time operating staff and introduces serious potential reliability problems. The CAISO further contends that its current tariff provisions are insufficient to address certain local market power issues. In particular, the CAISO states that in the absence of a security-constrained day-ahead nodal energy market, it is especially susceptible to what it refers to as the "dec game." The CAISO has described the "dec game" as cases where generators anticipate that a specific transmission line will be

congested and schedule their unit(s) far beyond the limited local transfer capability in the forward markets, thereby forcing the CAISO to use the generators' decremental or "dec" bids in real-time to mitigate the resulting congestion.¹

Summary of Amendment No. 50

4. Specifically, the CAISO proposes that in cases where it foresees intra-zonal congestion due to abnormal system conditions (such as transmission maintenance) the CAISO would publish the total allowable output for a generating unit or group of generating units constrained by the same intra-zonal interface by 1800 hours two days before the operating day. The CAISO may update that information following the day-ahead scheduling process. Generators then have the choice to submit hour-ahead schedules that conform to the CAISO's published limits. If generators do this and the congestion is relieved, the CAISO would take no further action. If congestion remains despite generators' efforts to conform to those published limits, the CAISO proposes to create cost-based proxy energy bids for each unit affecting the constrained interface. For thermal units, the CAISO proposes to create these proxy bids using the unit's heat rate curve, a monthly bid-week average price of natural gas at California border delivery points, and a \$6/MWh O&M adder. (For non-thermal units, the CAISO would use the reference price developed for Automatic Mitigation Procedures (AMP).)

5. The CAISO would dispatch units using these proxy bids based on cost, effectiveness on the constraint, and other factors (such as energy limitations and hydrological conditions, for example) to alleviate the constraint immediately after final hour-ahead schedules are issued. The CAISO would not dispatch any reliability must-run unit below its required reliability operating level. In addition, the CAISO would not adjust qualifying facility generation unless such adjustments were unavoidable. The CAISO would dispatch proxy bids after the close of the hour-ahead bids to relieve congestion regardless of whether this congestion was caused by abnormal system conditions or whether the congestion arose due to changes in conditions closer to real time. The CAISO proposes to dispatch units both to higher operating levels (incremental dispatch) and to lower operating levels (decremental dispatch). The CAISO proposes to pay incremental bids dispatched at the greater of 110 percent of the cost-based proxy or the zonal market clearing price (MCP). It proposes to charge decremental bids dispatched at the lesser of 90 percent of the cost-based proxy or the zonal MCP.

¹ See CAISO transmittal letter to Amendment No. 42, p. 7, Docket No. ER02-922-000 (January 31, 2002) (Amendment No. 42 Transmittal Letter).

6. Another element of Amendment No. 50 is the CAISO's proposal to share individual generating unit outage information (currently confidential under the tariff) with the operations engineering and/or the outage coordination division(s) of other Control Area operators, Participating Transmission Owners (Participating TOs), Metered Sub-Systems (MSS) Operators or other entities engaged in the operation and maintenance of the electric supply system whose system is significantly affected by the generating unit. The CAISO proposes to limit this data sharing to entities who have executed the Western Electricity Coordinating Council (WECC) Confidentiality Agreement for Electric System Data. The CAISO states that it needs these changes in order to be better able to coordinate transmission maintenance outages with planned generating unit outages. According to the CAISO, the availability or absence of local reliability generating units often dictates whether or not certain transmission work can actually be performed. The CAISO states that the technical nature of outage coordination necessitates that it share selected generating unit outage information with other system operators.

7. Furthermore, the CAISO states that it increasingly confronts congestion caused by siting of new generating units in areas that lack adequate transmission facilities to deliver the new generation. In particular, the CAISO points to two new generating units under CAISO participating generator agreements that are located in Mexico (Mexican generating units) but are connected to the CAISO controlled grid. The Mexican generating units are scheduled to be placed in full commercial service on June 1, 2003. The CAISO states that energy from these new generating units, combined with the existing energy that is imported regularly from a neighboring Control Area, is expected to cause considerable congestion within the CAISO Control Area on the 500/230 kV transformer bank at San Diego Gas & Electric's Miguel substation. The CAISO states that the combined amount of power that is predicted to try to flow across the Miguel transformer bank from the generating units in Mexico and imported from Arizona will far exceed the capability of the 500/230 kV transformer bank at Miguel. The CAISO states that the most viable long-term solution to this problem, apart from upgrading the transmission system at Miguel to remove the bottleneck, would be to use an LMP-based system or some other long-term comprehensive solution in the forward markets that would (1) allow System Resources and Participating Generators to compete for scarce transmission, and (2) ensure forward schedules did not create the congestion.² The CAISO states that the provisions of Amendment No. 50, when applied to this situation, would allow it to pre-dispatch mitigated cost-based bids from the new generating units (as well as any other generating units from participating generators that are effective in

²See CAISO Transmittal Letter to Amendment No. 50, p. 14-15 (March 31, 2003) .

relieving the congestion). However, the CAISO states that Amendment No. 50 is a less than-optimal solution, and requested that the Commission convene a technical conference to explore other alternatives to deal with this problem in the time between when this Amendment is put into effect and a long-term comprehensive solution can be implemented.

NOTICE OF FILINGS AND RESPONSIVE PLEADINGS

8. Notice of the CAISO's filing was published in the Federal Register³ with comments, interventions and protests due on or before April 21, 2003.
9. The Public Utilities Commission of the State of California (California Commission) filed a timely notice of intervention and comments.
10. Timely motions to intervene with no substantive comments were filed by the California Department of Water Resources State Water Project (California DWR); the Cities of Anaheim, Azusa, Banning, and Colton, California (collectively, Southern Cities); the Cities of Redding and Santa Clara, California and the M-S-R Public Power Agency (collectively, City of Redding); the City and County of San Francisco (San Francisco); and the Modesto Irrigation District (MID).
11. Timely motions to intervene and comments were filed by the California Electricity Oversight Board (California EOB); Duke Energy North America LLC and Duke Energy Trading and Marketing LLC (collectively, Duke); Northern California Power Agency (NCPA); Pacific Gas and Electric Company (PG&E); and Southern California Edison Company (SCE).
12. Timely motions to intervene and protest were filed by Calpine Corporation (Calpine); California Municipal Utilities Association (CMUA); the Cogeneration Association of California and the Energy Producers and Users Coalition (CAC/EPUC); Coral Power LLC, Energia Azteca X, S. de R.L. de C.V., and Energia de Baja California, S. de R.L. de C.V. (collectively, Coral); Dynegy Power Marketing, Inc., El Segundo Power, LLC, Cabrillo Power I LLC and Cabrillo Power II LLC (collectively, Dynegy); the Independent Energy Producers Association (IEP); Metropolitan Water District of Southern California (Metropolitan); Reliant Energy Power Generation, Inc., Reliant Energy Services, Inc., (collectively, Reliant), Mirant Americas Energy Marketing, LP, Mirant California, LLC, Mirant Delta, LLC and Mirant Potrero, LLC, (collectively,

³68 Fed. Reg. 17,795 (2003).

Mirant); Sempra Energy (Sempra); Transmission Agency of Northern California (TANC); and Williams Energy Marketing & Trading Company (Williams). The City of Santa Clara, California (Santa Clara) timely filed a separate protest and request for suspension. Mesquite Investors, LLC (Mesquite) filed a motion to intervene out of time. American Wind Energy Association (AWEA) filed a motion to intervene out of time and protest. On May 6, 2003, the CAISO filed an answer to the protests.

13. On May 1, 2003, a noticed informal technical conference was held to address issues raised by the filing, and to address issues related to Mexican generation. Comments were subsequently filed by the CAISO, Mirant, Mesquite, SCE, Reliant, Williams, IEP, NCPA, California Commission, California EOB, and Dynegy. The CMUA filed comments on the technical conference and a request for further evidentiary proceedings. The Border Generation Group (BGG) filed a motion to intervene out of time and comments on the technical conference. Reply comments were filed by the CAISO, BGG, IEP, PG&E, SCE, and Williams. FPL Energy, LLC (FPL) filed a motion to intervene out of time and reply comments.

DISCUSSION

Procedural Matters

14. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure,⁴ the timely, unopposed motions to intervene serve to make those who filed parties to this proceeding. In addition, due to the early stage of the proceeding, their interest in the proceeding, and the lack of undue prejudice or delay, we find good cause to accept the unopposed motions to intervene out-of-time.

15. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure⁵ prohibits the filing of an answer unless permitted by the decisional authority. We find good cause to accept the CAISO's answer because it will aid our decision in these proceedings.

Interim Intra-zonal Congestion Management

Commission Analysis

⁴18 C.F.R. § 385.214 (2003).

⁵18 C.F.R. § 385.213(a)(2) (2003).

16. The Commission agrees that intra-zonal congestion can be a problem that needs to be addressed, particularly if market participants engage in gaming strategies that allow them to profit from market dysfunction they intentionally caused. Management of intra-zonal congestion can be an operational burden and threaten grid reliability. While Amendment No. 50 is the latest proposal by the CAISO to manage intra-zonal congestion, we have previously attempted to assist the CAISO in addressing such problems. We find it important to review the CAISO's congestion management system, the remedies it has at hand to handle congestion, and the remedies the Commission has previously directed the CAISO to pursue to address this problem.

Current CAISO Congestion Management System

17. The current congestion management system of the CAISO is based on a zonal model that differentiates between two kinds of congestion: inter-zonal and intra-zonal congestion. The mitigation and settlement for each has important differences.

18. Inter-zonal congestion management refers to the management of congestion between zones. Under the current CAISO rules, forward inter-zonal schedules are limited to the available transmission capacity between each zone. Congestion is managed using adjustment bids to ration available transmission capacity. Only feasible schedules are accepted in the CAISO inter-zonal scheduling process.⁶ Those who value the available transmission between zones are able to compete for it through their adjustment bids. Holders of firm transmission rights between zones can schedule across the zones without paying any net congestion charges.

19. Intra-zonal congestion management refers to the management of congestion within a zone. Intra-zonal congestion, unlike inter-zonal congestion, is managed in real-time in the energy imbalance market for supplemental energy. In the forward market, market participants may submit schedules within a zone without regard to the available transmission capacity. If intra-zonal congestion results from these schedules, it must be managed in real time by means of supplemental energy bids (inc and dec bids) which are submitted to the CAISO 45 minutes before the operating hour. This occurs despite the fact that the CAISO is often aware of the intra-zonal congestion and the infeasibility of the accepted schedules. The initial market design relied on projections that zones would be configured in such a way that intra-zonal congestion would be minimal and the simplification would benefit market participants. Unfortunately, this has not proven to

⁶The "dec game" is generally not possible in the inter-zonal congestion management process.

be an accurate prediction. At present, there are three zones in active use and the CAISO states that intra-zonal congestion has been increasing. The costs of relieving the intra-zonal congestion are not paid by those who create the congestion, but rather by the Scheduling Coordinators in proportion to their scheduled load within the zone plus net export out of the zone. Such intra-zonal charges to Scheduling Coordinators are independent of the entities that create the congestion and thus provide little incentive for market participants to submit schedules that minimize congestion costs.

Original Intent and Existing Tariff Provisions for Increased Congestion

20. When the three investor-owned utilities (IOUs) originally proposed to transfer control of their transmission facilities to the CAISO in 1996, they proposed a system using "locational, marginal cost pricing for managing transmission congestion." The Joint Applicants agreed to use zones to simplify this pricing approach. Congestion within zones was expected to be small in magnitude or to occur infrequently, and new zones would be created when in-zone congestion increased above a pre-established numerical criterion.⁷

21. This proposal is reflected in Section 7.2.7.2.1 of the CAISO's tariff, which reads:

[i]f over a 12-month period the [CAISO] finds that within a Zone the cost to alleviate the congestion on a path is equivalent to at least 5 percent of the product of the rated capacity of the path and the weighted average High Voltage Access Charge and Low Voltage Access Charge, as applicable, of the Participating TOs, the [CAISO] may announce its intention to create a new Zone. A new Zone will become effective 90 days after the ISO Governing Board has determined that a new Zone is necessary.

22. Furthermore, the CAISO has the option of shortening the 12-month and 90-day periods for creating new zones if the governing board determines that expected congestion would meet the above criterion.

⁷See Joint Application of Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (Joint Applicants) for Authorization to Convey Operational Control of Designated Jurisdictional Facilities to an Independent System Operator, Docket No. EC96-19-000, pp. 89-97 (1996).

Amendment No. 23 and the Realization that the Congestion Management System Was Fundamentally Flawed

23. On November 10, 1999, the CAISO filed Amendment No. 23 to address the problem of individual market participants submitting uncompetitive bids to relieve intra-zonal congestion. This filing highlighted a problem discrete from increased levels of intra-zonal congestion. Here the CAISO identified a fundamental problem in its bidding rules, which allowed generators to profit by offering distorted bids that created artificial congestion. In Amendment No. 23, the CAISO proposed, among other things, to expand its out-of-market authority to apply also in instances where generators had in fact submitted bids but, in the determination of the CAISO, the markets for such bids were not competitive. In an order issued on January 7, 2000,⁸ the Commission rejected this proposal and stated that because the CAISO was required to accept all transmission schedules, including those that do not recognize existing transmission constraints, its congestion management scheme created opportunities for fictional congestion. The Commission noted that under the congestion management approach adopted by the CAISO, significant congestion is to be managed by the creation of zones. Stating that the existing congestion management method was fundamentally flawed, the Commission directed the CAISO to design a comprehensive replacement congestion management approach.⁹

24. In managing intra-zonal congestion, the CAISO faces two potential problems: rising levels of congestion within a zone, and the acceptance of infeasible schedules. The solution for the first problem is already in the CAISO tariff,¹⁰ while the other highlights a fundamental flaw in the CAISO's zone-based congestion management system. The first problem occurs when intra-zonal congestion rises to a level significant enough that management of it in real-time becomes burdensome. In these cases, the CAISO may use its power under its tariff to create a new zone, thereby moving the congestion into inter-zonal congestion, which can then be managed in the forward

⁸California Independent System Operator Corporation, 90 FERC ¶ 61,006 (2000), reh'g denied 91 FERC 61,026 (2000) (January 2000 Order).

⁹January 2000 Order at p. 61,013.

¹⁰CAISO Tariff Section 7.2.7., Creation, Modification and Elimination of Zones.

markets. As the CAISO and its Market Surveillance Committee (MSC) recognized, the solution available to them was the creation of new zones.¹¹

25. The second problem the CAISO faces, however, is that the acceptance of infeasible schedules within a zone creates opportunities and incentives for market participants to distort their bids in the forward markets to create congestion which they are then paid to relieve in real-time. This problem highlights a fundamental flaw in the CAISO's intra-zonal congestion management system – that as long as the CAISO continues to accept infeasible schedules within each zone, it will continue to face perverse effects in real-time.

26. It was the realization of this fundamental flaw that led the Commission to call for the CAISO to pursue an overhaul of its congestion management system. The CAISO began a stakeholder process to develop an alternate comprehensive congestion management system, but the subsequent upheaval in the CAISO markets in 2000 and 2001 delayed the CAISO's efforts. In November 2001, the CAISO began work on a comprehensive market redesign proposal.

Amendment No. 42

27. On January 31, 2002, the CAISO filed Amendment No. 42 to its tariff which proposed, among other things, an interim means to manage intra-zonal congestion until the CAISO could permanently reform its zone-based congestion management system. In an order issued on March 27, 2002, the Commission rejected this portion of Amendment No. 42 in light of the CAISO's statement that it would be filing a longer-term comprehensive design in the next several months (ultimately the May 1, 2002 MD02 filing).¹² The Commission stated that "[we do] not believe another piecemeal approach presented in isolation from other respects of the California market design, is just and reasonable. The [CAISO] needs to address this issue in conjunction with other market design problems . . ."¹³

¹¹See Market Surveillance Committee Opinion on the ISO's Proposal for Congestion Management Reform, July 31, 2000, p. 1.

¹²California Independent System Operator Corporation, 98 FERC ¶ 61,327 (2002) (March 2002 Order).

¹³March 2002 Order at p. 62,380.

28. In its filing for Amendment No. 42, the CAISO argued that "the addition of new generating units in California ... often contributes to intra-zonal congestion and increase[s] the opportunities generators have for playing the Dec game during off-peak conditions."¹⁴ The CAISO further stated that "[t]he [CAISO] is aware of certain shortcomings of its current zonal congestion management model and already has publicly announced its intention to move to a locational marginal pricing model that will address all grid congestion in the forward markets."¹⁵

29. Protesters in that proceeding again suggested that until the CAISO moved to its comprehensive market redesign based on a full-network model with LMP pricing, it could use its existing authority to create new zones. The creation of a new zone would have effectively removed the opportunity for the "dec-game" by converting the intra-zonal congestion into inter-zonal congestion, thereby moving the management of the congestion from real-time into the day-ahead time-frame, where Scheduling Coordinators must submit schedules that are feasible. Even assuming a year or more for implementation, had the CAISO had undertaken that remedy then, it might not face such seemingly insurmountable imminent intra-zonal congestion now.

CAISO's Comprehensive Market Redesign Proposal (MD02) – Amendment No. 44

30. On May 1, 2002, the CAISO filed Amendment No. 44 to its tariff which offered a comprehensive market redesign proposal (MD02). In that filing, the CAISO proposed, among other measures, a security-constrained, day-ahead market based on locational marginal pricing and a full-network model. The CAISO proposed to integrate a fully detailed and accurate model of the transmission grid to identify constraints so that it could adjust schedules accordingly, and to eliminate the distinction between inter-zonal and intra-zonal congestion.

31. In an order issued on July 17, 2002,¹⁶ the Commission directed the CAISO to expedite the implementation of its integrated day ahead market, and authorized the

¹⁴See Amendment No. 42 Transmittal Letter, p. 9.

¹⁵See Amendment No. 42 Transmittal Letter, p. 14.

¹⁶California Independent System Operator Corporation, Investigation of Wholesale Rates of Public Utility Sellers of Energy and Ancillary Services in the Western Electricity Coordinating Council, 100 FERC ¶ 61,060 (2002), order on reh'g 101 FERC ¶ 61,061 (2002)(July 2002 Order).

CAISO to expend funds on the development of software and systems for locational marginal pricing and a full network model. The Commission directed the CAISO to file its integrated day-ahead market proposal and related market reforms by October 21, 2002, for implementation by January 1, 2003. In subsequent rehearings, the CAISO argued against expedited implementation of the integrated day-ahead market,¹⁷ and also against implementation of a simpler, modified day-ahead market.¹⁸ Consequently, and despite monthly status reports filed to the Commission pursuant to our November 27, 2002 Order, it is unclear when the CAISO plans to implement the integrated day-ahead market (MD02 Phase 2) and the full-network model with locational marginal pricing (MD02 Phase 3).

32. In its initial MD02 filing, the CAISO also discussed proposing an interim forward intra-zonal congestion management plan but did not file a proposal or tariff language to explain how it would accomplish this. In light of the CAISO's statement that it intended to file such a proposal with the Commission in the near future and the CAISO's then-ongoing stakeholder discussions, the Commission deferred action on that issue in the July 2002 Order.

Amendment No. 50

33. The CAISO now states that while LMP and the full-network model will ultimately address the "dec-game," Amendment No. 50 is needed in the interim until those market reforms can be implemented. The CAISO claims that because it has no way of managing intra-zonal congestion in the forward markets, intra-zonal congestion is creating an undue burden on their real-time operational staff and is introducing serious potential reliability problems. The CAISO further contends that its current tariff provisions are insufficient to address the "dec game." As support for its assertion, the CAISO refers to the Mexican generating units. The CAISO states that energy from these new generating units, combined with the existing energy that is imported regularly from a neighboring control area, is expected to cause considerable congestion within the CAISO control area, particularly on the Miguel substation. The CAISO estimates that it will have to curtail more than 500 MW of energy at least twelve hours each day to mitigate congestion after these generating units are placed in full commercial service on June 1, 2003. The CAISO estimates that the costs of mitigating the resulting congestion could

¹⁷See California Independent System Operator Corporation, 101 FERC ¶ 61,061 (2002), order on reh'g, 101 FERC ¶ 61,266 (2002) (October 2002 Order).

¹⁸See California Independent System Operator Corporation, 101 FERC ¶ 61,266 (2002) (November 2002 Order).

exceed \$4 million a month if suppliers bid decremental energy at the current floor of negative \$30/MWh.

34. In addition, the CAISO states in its comments on the May 1 Technical Conference that it would not be possible to implement the proposed Amendment No. 50 by June 1, 2003 when the Mexican generating units are scheduled to commence operation. The CAISO further states that even if its Amendment No. 50 is approved as proposed, it will not be adequate to address the Mexican generation problem. Moreover, the CAISO admits that:

"any changes to the [CAISO]'s existing systems – which the [CAISO] intends to abandon when it moves to the new MD02 market design – will have to be made by the same human resources that are currently working to develop the [CAISO]'s MD02 market redesign. Changes to the current system will be obsolete soon after they are made."¹⁹

Commission Ruling on Amendment No. 50

35. While we acknowledge the CAISO's concerns, we note that the CAISO fails to avail itself of provisions already approved in its current tariff, specifically designed to move significant intra-zonal congestion out of real-time and into the forward markets. As stated above, Section 7.2.7.2.1 of the CAISO's tariff allows the CAISO to create new zones. In addition, the CAISO has the option of shortening the 12-month and 90-day periods for creating new zones if the governing board determines that expected congestion would meet the specified criterion.

36. Since creating a new zone effectively converts intra-zonal congestion into inter-zonal congestion – where schedules filed in the day-ahead process must be feasible, recognizing inter-zonal constraints – the congestion can then be managed in the forward markets through competitive bidding for transmission capacity. The CAISO recognizes that "[t]he only way to prevent a supplier from profiting from the submission of an infeasible forward Schedule is to account for all constraints in the forward markets."²⁰ However, the CAISO's next statement, that "while LMP will do so, the current zonal market model does not" is somewhat misleading considering the existing provision to create new zones.

¹⁹CAISO May 6, 2002 comments on the May 1, 2003 Technical Conference, p. 10.

²⁰CAISO Answer, pp. 13-14.

37. We note that while intra-zonal congestion is open to manipulation through the "dec-game," the fact that inter-zonal congestion requires feasible schedules eliminates the opportunities to over-schedule in the day-ahead market with the intent of being paid to decrement in real-time. Thus, the CAISO could largely remove such persistent opportunities for the "dec-game" through the creation of new zones under its current tariff. Furthermore, had the CAISO explored the creation of a new zone when it first projected that the Mexican generation was going to be a problem, it would be well on its way to a solution.

38. We further note that the "dec-game" could be eliminated through the implementation of a rational market-based congestion management system with a full-network model. Under the CAISO's proposed Phase 3 of its comprehensive market redesign, a security-constrained integrated day-ahead market will accept only schedules that are feasible, and thus the dec-game disappears. Thus, if there is too much generation in an area, the price for that generation would decrease. However, under the current flawed congestion management, the CAISO will allow those generators to schedule undeliverable energy in the day-ahead scheduling process, only to be faced with the potential of paying those generators not to produce in real-time. This strikes at the heart of the problem. As long as the CAISO continues to accept infeasible schedules, it will continue to face the result of potentially having to pay generators not to produce in areas of over-generation. The Commission sees it as a perverse outcome that increased generator availability and entry would potentially raise costs for California customers. In general, in a market-based context, one would expect increased generation availability to lower the overall cost of electricity rather than increase costs to consumers. Had the CAISO used the solution in its approved tariff back in January 2000, this would not be a problem today and the CAISO could focus its limited resources on implementing the badly-needed MD02 market redesign.

39. We find it important to reiterate that continuing to apply band-aid solutions to the current flawed system wastes the valuable resources of the CAISO and the Commission. It is imperative for the CAISO to proceed with all due diligence to implement its MD02 comprehensive market redesign. As we have stated in past orders, "a piecemeal repair to a faulty system is not an adequate response."²¹ However, because the CAISO has serious concerns that the "dec-game" may increase in the future, we will approve the CAISO's proposed Amendment No. 50, as modified below.

²¹See California Independent System Operator Corporation, 90 FERC ¶ 61,014 (2000).

40. The Commission has previously determined that the use of AMP for Local Market Power Mitigation in conjunction with RMR contracts provides sufficient protection against the exercise of market power through incremental bids.²² However, in the October 11 Order, we stated that if the CAISO believes that a further restriction on decremental bids was necessary, it may file a tariff amendment under Section 205 for prospective implementation to modify such mitigation.²³ We note that historical costs for decremental energy have been relatively small.²⁴ However, because of the inadequacies of the current CAISO market design in which infeasible schedules are accepted, we agree that there is a potential for abuse through the "dec game." The Commission agrees that it is inappropriate for market participants to profit from gaming strategies. Therefore, as discussed below, we will approve the CAISO's proposal to use mitigated bids to manage intra-zonal congestion and mitigate local market power, but only as it applies to decremental bids.

41. Furthermore, as the CAISO has acknowledged,²⁵ and as discussed below, there are inaccuracies inherent in identifying a generating unit's costs using a cost-based proxy bid. We agree with intervenors that these inaccuracies are significant and that a reference price is a superior market-based proxy to the CAISO's proposal. We therefore require that the CAISO use reference prices for dec bids to be administered by an independent entity, and applied to all generators – thermal and non-thermal.

Current intra-zonal congestion management procedures

42. Many parties agree that the current intra-zonal congestion management approach is flawed. They point out that there are no restrictions on submitting infeasible schedules, which could result in a situation in which the CAISO must accept dec bids which may not be competitive. Furthermore, all intra-zonal congestion must be resolved

²²See July 2002 Order at Paragraphs 41-45.

²³See October 11 Order at Paragraph 45.

²⁴According to the CAISO's 2002 Annual Report on Market Issues and Performance, decremental energy redispatch costs totaled \$1.4 million for the year (Ch. 7, p. 3, Table 7.1). Of the \$1.4 million figure, CAISO indicates that \$868,331 may be related to market power. (Table 7.2.) Comparing the \$1.4 million figure to total wholesale electricity costs of \$10.1 billion for the year (Ch. 3, p. 6), reveals that total decremental costs amounted to 0.014 percent of the total annual energy costs.

²⁵See Amendment No. 50 Transmittal Letter, p. 9.

in real-time, placing a burden on the CAISO operations personnel which may result in reliability problems.

43. Several parties acknowledge that Amendment No. 50 is an inferior solution to the comprehensive market redesign proposed in MD02, but urge its adoption as an interim measure until MD02 can be implemented.

44. The Commission agrees with intervenors that the current method in which the CAISO deals with intra-zonal congestion is inefficient and may be inadequate. Therefore, we believe that an interim, stop-gap measure may be useful until full application of the CAISO's MD02 proposal is complete. The Commission notes that approval of Amendment No. 50, as modified, cannot and should not be a substitute for the ultimate goal of a rational market-based congestion management system. Further, our approval is not meant to provide the CAISO with further justification to delay the implementation of a full-network model with locational pricing (MD02 Phase 3).

Generation limits posted prior to Day-Ahead Market and Generator Compliance

45. Several commenters argue that the CAISO's proposal is vague and lacks necessary detail. Dynegy points out that the CAISO provides no information as to how it will determine when an intra-zonal interface is congested or how it will determine the effectiveness of a resource to alleviate congestion in a specific location. Reliant states that the CAISO must provide transparent procedures that it will follow when allocating capacity.

46. Commenters also contend that the CAISO's proposal exposes them to potential anti-trust charges. Reliant states that while the CAISO proposes to permit "Participating Generators to mitigate the Congestion competitively amongst themselves," the proposal fails to provide the necessary detail regarding how suppliers would compete for transmission capacity. To the extent that the CAISO proposal appears to assume that the generators will somehow 'get together' and agree on how to apportion the output limits, several generators express concern that the CAISO's proposal could expose the generators to allegations of collusion

47. The CAISO states in its reply that collusion generally does not arise simply from the sharing of data, but instead from the sharing of data for the purpose of achieving some unlawful end.

48. We agree with intervenors that the CAISO's expectation that generators will somehow divide generating capacity amongst themselves could potentially subject generators to allegations of collusion, and we reject the CAISO's proposal to publish generating limits.

Cost-based proxy

49. Many commenters express concerns that the "cost-based" proxy bid proposed by the CAISO does not compensate generators for actual costs they may incur by decrementing generation, including the opportunity costs associated with foregone ancillary service sales opportunities and that while the CAISO indicates that it will take into account emissions limitations in its dispatch, it has not clarified how it will do so.

50. Protesters argue that the CAISO's proxy cost formula ignores the following costs: intrastate gas transportation costs, taxes, and grid management charges, opportunity costs such as the cost of replacement power, O&M associated with increased output, and fuel and emission limitations. Actual marginal costs associated with incremental output can include gas transportation imbalance penalties and other surcharges. Conversely, marginal costs associated with reduced output can include take-or-pay costs. Protesters also state that the marginal cost of a unit frequently on the margin must include return on capital. Other commenters have concerns with specific elements of the methodology.

51. Sempra points out that, if reference prices are used rather than cost-based proxy prices, then there is no need for the 10 percent adder (incremental) / subtractor (decremental) in order to reflect the inaccuracies inherent in identifying a Generating Unit's costs using a cost-based proxy bid. Sempra suggests, instead of the CAISO calculating "proxy" bids for thermal generators based on heat rates, gas costs, plus \$6.00/MWh O&M adder, which it argues would be non-compensatory under the circumstances, the CAISO should redispatch non-competitive resources to eliminate intra-zonal congestion based on the "reference" prices that are being (or could be) calculated by the CAISO's independent consultant for use in the CAISO's automatic mitigation procedure. Sempra maintains that the use of reference prices would avoid the obvious limitations associated with the cost-based approach to calculating proxy prices, such as not considering the increased start-up and minimum load costs and the costs associated with refusing delivery of natural gas at the last minute.

52. Similarly, Duke believes that the CAISO's proposal provides no legitimate basis for not using thermal generators' reference prices as their proxy bid. Since a thermal generator's reference price will be based on bids that were accepted during periods where there was no intra-zonal congestion (i.e., a competitive market), it is a superior market-

based proxy to the CAISO's proposal. Moreover, the CAISO's proposal provides no legitimate basis for discriminating between thermal and non-thermal resources in the identification of proxy bids.

53. CAISO responds to these arguments by stating that it has modeled its proxy price formula on the formula the Commission required with regard to price mitigation in the California wholesale power market proceedings in Docket No. EL00-95, *et al.*²⁶ The CAISO also believes that Amendment No. 50 actually should produce a disincentive to create congestion because if a generator creates congestion and such congestion is not relieved, under Amendment No. 50 that generator will receive a cost-based amount for its power.

54. The Commission agrees with intervenors that inaccuracies inherent in the development of cost-based proxies makes a reference price a superior alternative to such a proxy. Thus, we are directing the independent entity that determines the reference prices for the AMP to develop this decremental bid reference price.

Dispatch of Units to Relieve Congestion

55. Several commenters also expressed concerns about dispatch procedures. Reliant points out that the CAISO's transmittal letter fails to accurately describe its proposed tariff changes. For example, the CAISO omits discussion of proposed language in Section 7.2.6.1 of its tariff, which would permit the CAISO, under some circumstances, to request that generators completely shut down their unit(s). While this may be necessary under some circumstances, significant additional costs would be incurred to restart. Reliant states that Amendment No. 50, as proposed, does not provide for recovery of such costs.

56. Sempra states that the criteria for actually deploying this interim congestion management protocol should be focused on effectiveness in managing the intra-zonal congestion at the lowest system cost, consistent with the relevant physical capabilities of the relieving resources, including limitations on energy and emissions. Moreover, Sempra states that the CAISO should not be allowed to rely upon "operator judgment" as is currently the case for managing intra-zonal congestion in real-time. Several intervenors maintain that the CAISO's proposed dispatch method is a black box which provides no information as to how it will determine the effectiveness of a resource to alleviate congestion in a specific location. Dynegy notes that nodal pricing, as

²⁶See *San Diego Gas & Electric Co., et al.* 95 FERC ¶ 61,418, 62,559-64 (2001)

contemplated in MD02, provides the transparency needed to manage congestion in a non-discriminatory and efficient manner. Dynegy points out that nodal pricing relies on a network model that can be verified simultaneously by the market operator and market participants, and states that the CAISO has not provided its procedures for calculating congestion and the relative effectiveness of resources for alleviating it.

57. Duke argues that if certain generators would be subject to redispatch and mitigation for intra-zonal congestion on a regular basis, then the CAISO should be required to negotiate RMR agreements (at the option of the generator) that ensure that the generator will be able to recover its fixed costs and earn a return on investment. Duke suggests that the Commission may want to require the CAISO to adopt a "trigger" whereby a unit that is redispatched so many hours annually for local congestion management would be eligible for Condition 1 RMR status.

58. The CAISO submits that redispatching based on a generator's cost removes any opportunity to profit from the redispatch instruction. Thus, the CAISO argues that Amendment No. 50 greatly decreases the incentive to submit forward schedules that cause congestion.

59. The Commission agrees with intervenors that the proposal to examine first a unit's cost and second its effectiveness at relieving the constraint lacks the necessary detail to ensure that the method used to dispatch units is objective and transparent. The Commission directs the CAISO in a compliance filing on Amendment No. 50 to further explain the procedure it intends to utilize in dispatching generating units in dealing with congestion.

QF Exemption

60. Multiple commenters express concerns that the CAISO's proposal would allow it to alter the dispatch of Qualifying Facilities (QFs) and that such a result must be rejected

as inconsistent with Section 5.1.5 of the CAISO tariff²⁷ and is contrary to existing contracts.

61. Amendment No. 50 would authorize the CAISO in managing Intra-Zonal congestion to redispatch generators. No provision is made exempting QFs from this redispatch. The QF parties have Power Purchase Agreements with their local utilities and such redispatch authority may violate the QFs rights under PURPA.

62. The CAISO agrees that QFs, intermittent resources, and must-take resources should, under most circumstances, be exempt from the provisions of Amendment No. 50, and in any event be the very last resources the ISO would redispatch to manage Intra-Zonal Congestion. In order to clarify this intent, the CAISO has committed to adding language to Section 7.2.6.1, in a compliance filing on Amendment No. 50, that would read as follows:

The ISO shall only redispatch Regulatory Must-Take or Regulatory Must-Run Generation, Intermittent Resources or Qualifying Facilities to manage Intra-Zonal Congestion after fully redispatching all other available and effective generating resources, including Reliability Must-Run Units.²⁸

63. Intervenors are correct that the Commission has been reluctant to approve actions which interfere with the contractual obligations a QF may have with its purchasing-utility or thermal host.²⁹ They are also correct that Section 5.1.5 of the CAISO tariff

²⁷Section 5.1.5 provides:

Notwithstanding any other provision of the ISO Tariff, the ISO shall discharge its responsibilities in a manner which honors any contractual rights and obligations of the parties to contracts, or final regulatory treatment, relating to Regulatory Must-Take Generation of which protocols or other instructions are notified in writing to the ISO from time to time and on reasonable notice.

²⁸CAISO Reply at 20- 21.

²⁹See, e.g., San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent Operator and California Power Exchange, 95 FERC ¶ 61,418 at 62,553 (2001); San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent Operator and California Power Exchange, 97 FERC ¶ 61,275 at 62,191-92 (2001); San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent Operator and

(continued...)

specifically protects these rights when the procedures of Section 5.1.5 are followed. The Commission expects that the CAISO will abide by the provisions of its tariff at Section 5.1.5. Furthermore, the language that the CAISO has committed to add to Section 7.2.6.1 will address the commenters' concerns.

Sharing of Generator Outage Information

64. Most intervenors support the CAISO's proposed modification to the ISO Tariff to allow it to share relevant Generating Unit Outage information. Duke supports the proposal, but recommends that the CAISO should be required to maintain on its website a current list of all the entities that have signed the WECC Confidentiality Agreement, and the person(s) at that entity authorized to receive the generator outage information. The California EOB believes approval should be granted with direction to the CAISO to provide reports at specified intervals that assess the effect of allowing the limited communication of generation outage information. PG&E agrees with the proposed modification and also points out that in addition to the safeguards within the WECC Agreement, Order No. 889³⁰ requires operations engineering personnel of the Participating Transmission Owners to maintain the confidentiality of such information and prohibits them from communicating this information to any merchant function of their organizations.

65. Other intervenors oppose certain aspects of the proposed Tariff modification, such as the sharing of outage information with only a subset of California's market participants. Intervenors note that the vague reference to "other entities engaged in the operation and maintenance of the electric supply system" fails to describe clearly the entities with which the CAISO will share outage information. Williams finds this proposal unreasonably broad, and states that there is no legitimate reason for sharing such confidential information.

66. The CAISO asserts that in order to allow for effective coordination of Generator Outages, the CAISO must be able to exchange information with affected entities. In its answer the CAISO states that it should not be required to post the names of all persons

²⁹(...continued)

California Power Exchange, 98 FERC ¶ 61,204 at 61,170 (2002).

³⁰Open Access Same-Time Information System and Standards of Conduct, Order No. 889, FERC Stats. and Regs. ¶ 31,035 (1996), order on reh'g, Order No. 889-A, FERC Stats. and Regs. ¶ 31,049 (1997), order on reh'g, Order No. 889-B, FERC Stats. and Regs. ¶ 31,253 (1997), order on reh'g, Order No. 889-C, 82 FERC ¶ 61,046 (1998).

the entities have authorized to receive generator outage information. The CAISO also states that those entities that express concern about the possible release of confidential information have a number of possible actions they can take if they believe that an entity has improperly divulged information, such as seeking recourse pursuant to the terms of the WECC Agreement or bringing a complaint under Section 206 of the FPA.

67. The Commission agrees with the CAISO that the task of creating and maintaining a website containing a current list of all the entities that have signed the WECC Confidentiality Agreement, and the person(s) at that entity authorized to receive the generator outage information would be an unnecessary burden and there would not be a justifiable benefit to this undertaking. The Commission further agrees with the CAISO that there is ample opportunity to seek recourse for violation of the information sharing provisions contained in this proposal. The Commission also agrees with intervenors that the proposed Tariff language is vague and does not adequately distinguish which entities will be allowed to receive this sensitive information. Therefore the Commission will require the CAISO in a compliance filing on Amendment No. 50 to modify the language as discussed below.

68. The CAISO asserts that in order to maintain a smooth, reliable flow of transmission work, the CAISO Operations Engineering and CAISO Coordination personnel must have the ability to share relevant Generating Unit Outage information with other system operators. The Commission conditionally approves the proposal to share generator outage information subject to modification. The Commission finds that the inclusion of "other entities" is too vague and has therefore determined it to be unnecessary. The Tariff language that the Commission approves is as follows:

In order to maintain reliable operation of the ISO Control Area, the ISO may share individual Generating Unit Outage information with the operations engineering and/or the outage coordination division(s) of other Control Area operators, Participating TOs, and MSS Operators engaged in the operation and maintenance of the electric supply system whose system is significantly affected by the Generating Unit and who have executed the Western Electricity Coordinating Council Confidentiality Agreement for Electric System Data.

69. The Commission believes that the sharing of generator outage information with affected market participants will improve the ability to coordinate transmission maintenance outages with planned generating unit outages.

The Commission Orders:

Docket No. ER03-683-000, et al.

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(A) The CAISO's proposed Amendment No. 50 is hereby accepted in part and rejected in part, to become effective, as modified, without hearing or suspension, on May 30, 2003, as discussed in the body of this order.

(B) The CAISO is hereby directed to file a revised CAISO Tariff consistent with Ordering Paragraph (A) within 30 days of the date of this order.

By the Commission.

(S E A L)

Magalie R. Salas,
Secretary.