

107 FERC ¶ 61, 042  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;  
Nora Mead Brownell, and Joseph T. Kelliher.

California Independent System Operator  
Corporation

Docket Nos. ER03-683-002  
ER03-683-003

ORDER ON COMPLIANCE FILING

(Issued April 16, 2004)

1. In this order, we accept in part and reject in part the California Independent System Operator Corporation (CAISO)'s compliance filings made in response to an order issued May 30, 2003 accepting, subject to modification, the CAISO's Amendment No. 50 to its tariff.<sup>1</sup> The acceptance in part and rejection in part reflects the appropriate implementation of our previous findings regarding the California markets and will promote a more efficient operation of the wholesale electricity markets in California.

**Background**

2. On March 31, 2003, the CAISO filed its proposed Amendment No. 50 to provide the CAISO with a revised method for managing intra-zonal congestion and to permit the CAISO to share generator outage information with entities operating transmission and distribution systems affected by the outage. The CAISO stated that this amendment offered an interim solution until it implements locational marginal pricing (LMP) or some other long-term comprehensive congestion management solution. In the May 30 Order, the Commission accepted, subject to modification, the CAISO's proposed Amendment No. 50 and directed the CAISO to submit a compliance filing within 30 days.

3. On June 30, 2003, the CAISO submitted a compliance filing (June 30 compliance filing) in response to the May 30 Order. On July 18, 2003, the CAISO submitted an addendum to its compliance filing (Addendum).

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<sup>1</sup> California Independent System Operator Corporation, 103 FERC ¶ 61,265 (2003), order on reh'g 107 FERC ¶ 61,028 (2004) (May 30 Order).

**Notice of Filings and Responsive Pleadings**

4. Notice of the June 30 compliance filing was published in the Federal Register, 68 Fed. Reg. 41334 (2003), with comments, interventions and protests due on or before July 21, 2003. Notice of the July 18 Addendum filing was published in the Federal Register, 68 Fed. Reg. 44938 (2003) with comments, interventions and protests due on or before August 8, 2003.
5. On July 21, 2003, protests were filed by Duke Energy North America LLC and Duke Energy Trading and Marketing L.L.C. (collectively, Duke); the Indicated Generators;<sup>2</sup> the Independent Energy Producers Association (IEP); the California Department of Water Resources, State Water Project (California DWR); the Northern California Power Agency (NCPA) and Coral Power, LLC, Energia Azteca X, S. de R.L. de C.V., Energia de Baja California, S. de R.L. de C.V., and Termoelectrica De Mexicali<sup>3</sup> (jointly, BGG).
6. On August 5, 2003, the CAISO filed an answer to the protests (August 5 Answer).
7. On August 8, 2003, protests to the CAISO's Addendum filing were filed by Duke; Coral Power, LLC, Energia Azteca X, S. de R.L. de C.V., Energia de Baja California, S. de R.L. de C.V. (collectively, Coral); Termoelectrica De Mexicali (Termoelectrica); and the Indicated Generators. On August 8, 2003, the California Electricity Oversight Board (EOB) submitted comments on the filing.
8. On August 22, 2003, BGG filed an answer to the CAISO's August 5 Answer.
9. On August 25, 2003, the CAISO filed an answer to the protests to the Addendum filing.
10. On February 2, 2004, a supplemental protest and request for emergency cease and desist order was filed by 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, The La Rosita Generators).

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<sup>2</sup> The Indicated Generators are Dynegy Power Marketing, Inc., El Segundo Power LLC, Long Beach Generation LLC, Cabrillo Power I LLC, Cabrillo Power II LLC, Mirant Americas Energy Marketing, L.P., Mirant California, LLC, Mirant Delta, LLC, Mirant Potrero, LLC, Reliant Energy Power Generation, Inc., Reliant Energy Services, Inc. and Williams Energy Marketing & Trading Company.

<sup>3</sup> We note that Termoelectrica has not filed a motion to intervene in these proceedings. Pursuant to Rule 211 of the Commission's Rules of Practice and Procedure, 18 C.F.R. 385.211, its protest will be considered in determining the appropriate action to be taken, but will not serve to make Termoelectrica a party to these proceedings.

11. On February 17, 2004, the CAISO filed an answer (February 17 Answer) to the supplemental protest and request for emergency cease and desist order filed by The La Rosita Generators.
12. On February 17, 2004, a response to the La Rosita Generators' supplemental protest and request for emergency cease and desist order was filed by Potomac Economics.
13. On March 3, 2004, The La Rosita Generators filed an answer to the CAISO's February 17 Answer.

## **Discussion**

### **Procedural Matters**

14. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2)(2003), prohibits an answer to a protest and/or answer unless otherwise ordered by the decisional authority. We will accept BGG's, Potomac Economics', The La Rosita Generators', and the CAISO's answers because they have provided information that assisted us in our decision-making process.

### **Analysis**

#### **A. Interim Provisions/Sunset Date**

### **Background**

15. In its proposal, the CAISO stated that its current method for dealing with intra-zonal congestion was inefficient and inadequate. The CAISO stated that under its current tariff provisions, it must resolve intra-zonal congestion in real-time which placed undue burdens on its real-time operating staff and would introduce serious potential reliability problems. Consequently, the CAISO proposed Amendment No. 50 as an interim, stop-gap measure in order to assist the CAISO in relieving this operational burden.
16. In the May 30 Order, the Commission accepted the CAISO's Amendment No. 50 proposal, subject to modification, noting that its approval should not be a substitute for the ultimate goal of a rational market-based congestion management system.

### **Comments**

17. The Indicated Generators state that the May 30 Order specifically contemplated that any tariff revisions resulting from Amendment No. 50 would be interim in nature. However, the Indicated Generators argue, nowhere in either the CAISO's June 30

compliance filing or its Addendum filing does the CAISO recognize the interim nature of the proposed tariff changes. Thus, the Indicated Generators state, the Commission should reiterate its expectation that the CAISO will continue to develop and implement the full-network model with LMP without delay.

18. The CAISO responds that it does not believe that it should be required to impose specific sunset dates or conditions on these tariff changes.

### **Commission Discussion**

19. In the May 30 Order, we agreed with intervenors that the CAISO's pre-Amendment No. 50 method for dealing with congestion management was inefficient and perhaps inadequate, and moreover, that the implementation of the CAISO's MD02 proposal was the ultimate solution. Accordingly, we approved the CAISO's Amendment No. 50 proposal, with modifications, as an interim measure until MD02 could be implemented. The Commission sees no evidence that the CAISO now intends for this to become a permanent fixture in California wholesale energy markets. The Commission sees no reason for imposing a specific sunset date on the provisions contained in Amendment No. 50. Accordingly, we will deny the Indicated Generators' protest.

20. We note, however, that the CAISO has included language in tariff section 7.2.6.1.1(a) 4 which provides for the determination of the decremental reference level by zone or node, commensurate with the pricing granularity in effect. Because this provision would only apply after the implementation of LMP, by which time this interim provision will no longer be in effect, it is inappropriate to include it at this time and we direct the CAISO to remove the reference to nodal pricing from this section.

### **B. Tariff Provisions**

#### **Background**

21. The CAISO proposed to create cost-based proxy energy bids for each unit affecting the constrained interface. 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 proposed to dispatch units both to higher operating levels (incremental dispatch) and to lower operating levels (decremental dispatch). The CAISO proposed to pay incremental bids dispatched at the greater of 110 percent of the cost-based proxy or the zonal market clearing price (MCP). It proposed to charge decremental bids dispatched at the lesser of 90 percent of the cost-based proxy or the zonal MCP.

22. The Commission approved the CAISO's proposal to mitigate bids in order to manage intra-zonal congestion but only as it applied to decremental bids. The Commission also found that inaccuracies inherent in the development of cost-based proxies made a reference price a superior alternative to such a proxy. The Commission therefore directed that the independent entity that determines the reference prices for the AMP should develop the decremental bid reference price.

### **Comments**

23. Duke notes that proposed section 7.2.6.1 of the CAISO Tariff indicates that the CAISO will use decremental reference bids to manage intra-zonal congestion, even when market decremental bids could be used in-sequence. The Indicated Generators state that the proposed tariff language and the CAISO's Operating Procedure M-401 may be inconsistent in that the Operating Procedure states that market bids are to be taken in sequence before resorting to the reference prices while proposed tariff section 7.2.6.1 states that the CAISO will dispatch units according to the reference prices. Duke further states that if a generator that has been dispatched for management of intra-zonal congestion has a decremental bid in merit sequence, it should be charged the zonal market clearing price and not its reference price. Similarly, Duke maintains, a generator that has been dispatched for intra-zonal congestion management should be charged the lesser of the reference price or the zonal market clearing price.

24. The CAISO agrees that it should use market decremental bids in sequence when it has a requirement for decremental energy and that generating units dispatched for intra-zonal congestion should be settled at the lower of the decremental bid reference price or the zonal market clearing price. The CAISO offers that it would be willing to modify its tariff to expressly provide for this "lesser of" settlement for decremental out of sequence dispatch or "greater of" settlement for incremental out of sequence dispatch.

### **Commission Discussion**

25. The Commission believes that the CAISO's answer has alleviated the Intervenor's concerns and we direct the CAISO to submit revised tariff sheets within 30 days of the date of this order that implement the changes it has committed to making.

### **C. Proposed Methodology**

#### **Application of Effectiveness Factors**

#### **Background**

26. In its application, the CAISO proposed to dispatch generators in order to relieve congestion based on various factors. One element the CAISO intended to consider was a

particular generator's effectiveness on relieving the constraint. The original application lacked explanation relating to the factors that would be considered in the effectiveness of a unit upon a constraint. The Commission, therefore, required that the CAISO further explain the procedure it intended to utilize in dispatching generating units in dealing with congestion.

## **1. Insufficient Detail**

### **Comments**

27. Duke and IEP state that the June 30 compliance filing does not provide sufficient detail regarding the use of effectiveness factors. They contend that Operating Procedure M-401 does not address how the CAISO will determine the effectiveness of a resource to alleviate congestion in a specific location. Duke and IEP state that while Operating Procedure M-401 describes how the CAISO will use effectiveness factors to determine effective bids for dispatch, it does not describe what those factors are, or how they are calculated.

28. The CAISO responds that Operating Procedure M-401 is an operating procedure that sets forth how to dispatch units in real time to manage intra-zonal congestion and, therefore, does not provide a detailed discussion of how effectiveness factors, which are calculated off-line, are determined. Also, the CAISO notes, Operating Procedure M-401 section 2.3.2 states that it will dispatch units decrementally based only on their effectiveness factors to minimize the volume of energy that must be dispatched to alleviate congestion. The effective price is determined by multiplying the unit's decremental price by the effectiveness factor.

### **Commission Discussion**

29. In the May 30 Order, the Commission agreed with intervenors that the proposal to first examine a unit's cost and second its effectiveness at relieving a constraint lacked the necessary detail to ensure that the method to dispatch units is objective and transparent. The Commission notes that although the CAISO has provided further explanation of its proposal with regard to the effectiveness factors it plans on utilizing in determining dispatch, more explanation is needed. Therefore, we direct the CAISO to explain, in further detail, what the effectiveness factors are and how they are calculated.

## **2. Public Availability**

### **Comments**

30. IEP argues that the Commission should require the CAISO to publish all effectiveness factors, and should publish on a continual basis all elements, including effectiveness factors, associated with intra-zonal congestion.

31. The CAISO answers that while it believes it is reasonable and appropriate for Scheduling Coordinators to be provided with the effectiveness factors of their own units, the CAISO fails to see any justification for making effectiveness factors publicly available to all market participants. Moreover, the CAISO maintains, publicly providing such information is likely to exacerbate the exercise of local market power as each market participant will be able to ascertain its comparative advantage in relieving local congestion and those that have an advantage will use that leverage to their own benefit.

### **Commission Discussion**

32. The Commission agrees with the CAISO's concerns that making public the effectiveness factors for a specific unit could be used by market participants in an attempt to achieve a better position in the market. Therefore we will deny intervenors' request to make this information public. We also agree with intervenors and the CAISO that it is appropriate to share the effectiveness factors with market participants for their own units and we find that this information should be made available to the respective Scheduling Coordinator.

## **3. Calculation of Reference Prices**

### **Comments**

33. The EOB believes the Addendum is consistent with the May 30 Order and should be approved by the Commission. However, the EOB asks the Commission to clarify that hydroelectric resources may initially seek determination of reference levels through consultation as provided in step 2 of proposed tariff section 7.2.6.1.1. The EOB contends that consultation may lead to varied and particularized reference prices that better conform to the operational realities of limited hydroelectric units.

34. The Indicated Generators state that the CAISO's June 30 compliance filing does not adequately explain the criteria utilized by the CAISO in arriving at the proposed methodology or the methodology itself. The Indicated Generators further note that the CAISO's Addendum merely contains proposed tariff language that vaguely mirrors the proposal outlined by Potomac Economics without providing sufficient information or detail. The Indicated Generators also state that while the Addendum proposes a sequence

of steps to determine the methodology for calculating the decremental bid reference prices, it fails to explain the criteria utilized in arriving at these steps and it fails to provide the appropriate level of detail with each step.

35. The Indicated Generators argue that because intra-zonal congestion occurs randomly and its scope is unpredictable, factors such as the daily gas index, daily gas imbalancing with the local gas company, decremental heat rates, start-up costs, and CAISO scheduling requirements must be considered in the decremental reference price methodology to reflect the true decremental cost. The methodology proposed by Potomac Economics and adopted by the CAISO, the Indicated Generators contend, does not adequately take these factors into consideration.

36. Termoelectrica also argues that the proposed methodology requires further clarification in order to be workable and to protect generation owners from reference level bids for decrements in output that fail to allow generation owners to recover their costs. Termoelectrica argues that the O&M cost of \$6/MWh significantly overstates the O&M costs that would be avoided by many generators. As a result those generators would be overcharged for any energy they are forced to buy when reducing their output.

37. BGG states that the CAISO seeks to impose the same proxy price methodology that the Commission has already rejected in the May 30 Order. BGG adds that the CAISO has not complied with the May 30 Order because Potomac Economics has not developed the methodology it plans on using to develop decremental reference prices.

38. BGG raises concerns regarding the CAISO's continued failure to recognize the need to compensate generators for their restart costs when they are required to shut down by the CAISO. BGG also notes that because the reference levels included in MMIP Appendix A relate to situations where the output of a generator is increased, they do not reflect the restart costs that a generator will incur after it is required to shut down pursuant to decremental instruction from the CAISO.

39. Duke states that in the May 30 Order, the Commission directed that an independent entity determine reference prices and, therefore, the CAISO should not be allowed to draft the specifications for data to be used to determine reference levels. Moreover, Duke argues that the CAISO should not be allowed to assess the adequacy of the data supplied by the market participant. Duke further states that even though the Commission directed that an independent entity calculate decremental reference levels, the CAISO proposes, as a default position, that it will calculate a reference level. Duke requests that the Commission direct the CAISO to modify its proposed tariff section 7.2.6.1.1 (a) 5.

40. Duke notes that in the May 30 Order, the Commission found that there were significant inaccuracies inherent in identifying a generating unit's costs using cost-based



proxy bids, and directed the CAISO to use reference prices for decremental bids. However, Duke argues that the CAISO's proposed tariff section 7.2.6.1.1 (a) (3)-(4) resubmits the same proposal that the Commission previously rejected as inaccurate.

41. In its answer, the CAISO agrees with intervenors that in the rare circumstance in which a generating unit is ordered to shut down to manage intra-zonal congestion, the generator should be allowed to recover its start-up costs. The CAISO therefore agrees that a generator should be paid its start-up costs consistent with section 2.5.23.3.7.7 of the CAISO tariff when the CAISO directs a unit to shut down due to intra-zonal congestion. The CAISO states that it is willing to amend its tariff accordingly.

42. The CAISO further states that the May 30 Order directed it to use mitigated bids to manage intra-zonal congestion only as it applies to decremental bids and to use reference prices for decremental bids to be administered by an independent entity. The CAISO, in its Addendum, explains that when it decrements resources to manage intra-zonal congestion, it does so using decremental reference prices determined by the independent entity initially retained to determine reference prices for the CAISO's automatic mitigation procedures.

43. The CAISO also notes that the Commission provided no direction in its May 30 Order on how the decremental reference prices should be calculated. The CAISO states that the Commission's only directive in that regard was that prices should be determined by an independent entity. The CAISO argues that it has complied with the directives in the May 30 Order, and that all protests regarding the specific process used to determine the decremental reference price should be disregarded.

### **Commission Discussion**

44. The Commission agrees with intervenors that hydro resources may initially seek determination of reference levels through the consultative option as proposed in step 2 of tariff section 7.2.6.1.1. The Commission agrees that consultation may lead to particularized reference prices that better conform to the operational realities of hydro units.

45. The CAISO has applied an O&M adder that the Commission has previously stated to be a fair and accurate estimate of actual legitimate marginal costs of doing business<sup>4</sup> and the Commission will not reexamine this issue in this proceeding.

46. In the May 30 Order, the Commission agreed with intervenors that the inaccuracies inherent in the development of a cost-based proxy made a reference price a superior alternative to such a proxy. Thus, the Commission directed that an independent

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<sup>4</sup> See San Diego Gas & Electric Co, et al. 95 FERC ¶ 61,418 at 62,559-64 (2001).

entity should determine decremental reference prices for managing intra-zonal congestion. We agree with Duke that the tariff language submitted by the CAISO in its Compliance filing inappropriately confers responsibility on the CAISO. The Commission directs the CAISO to remove any reference to CAISO in conjunction with the determination and application of decremental bid reference levels in tariff section 7.2.6.1.1 and insert references to the independent entity, as was previously directed in our May 30 Order.

### **Adjustment Bids**

#### **Comments**

47. BGG submits that the CAISO's Operating Procedures prescribe the detailed instructions by which the operating staff carries out the Tariff and Protocol provisions when automatic systems do not perform the required function and operator intervention is required. BGG states that the June 20, 2003 version of Operating Procedure M-401,<sup>5</sup> section 2.1, provides for "Dispatch Adjustment Bids and Imbalance Energy – In Sequence" to clear intra-zonal congestion. BGG argues that without discussion or indication in Amendment No. 50 that it was going to change the bids used for managing intra-zonal congestion, the CAISO deleted Adjustments Bids from the list of bids that will be used for congestion management in the June 30, 2003 version of Operating Procedure M-401, and now provides only for "Dispatch Imbalance Energy Bids – In Sequence."

48. In its reply, the CAISO states that, in the past, when it has attempted to use Adjustment Bids as real-time energy bids to manage congestion, Scheduling Coordinators often refuse to perform these Adjustment Bids. Consequently, the CAISO states, it has seldom used Adjustment Bids in real time to manage congestion.

### **Commission Discussion**

49. It is apparent that the CAISO has used its June 30 Compliance Filing as a vehicle to propose changes to its operating procedures that were not a part of its March 31, 2003 proposal. In addition, the CAISO's statement that Adjustment Bids are seldom used to manage intra-zonal congestion is not adequate justification for altering its operating procedure. The Commission agrees with intervenors that the deletion of Adjustment Bids from section 2.1 of Operating Procedure M-401 is inappropriate and we direct the CAISO to restore the use of Adjustment Bids.

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<sup>5</sup> Operating Procedure M-401's stated purpose is to set forth actions to be undertaken by the CAISO to mitigate intra-zonal congestion.

## **D. Supplemental Protest of La Rosita Generators**

### **Comments**

50. In its supplemental protest, the La Rosita Generators argue that on January 20, 2004, the CAISO departed from the procedures contained in its Addendum. The La Rosita Generators state that the CAISO put into effect a new method for calculating the decremental reference level prices that effectively prevents the use of the market approach required by the Commission in its May 30 Order.

51. The La Rosita Generators state that the CAISO unilaterally implemented its new method on January 20, 2004 without making a filing with the Commission to amend its existing compliance filing or tariff. As a result, the new method is neither "on-file" nor has been accepted by the Commission, in violation of FPA section 205 and section 35.1(e) of the Commission's regulation, 18 C.F.R. § 35.1(e).

52. Further, the La Rosita Generators protest that the CAISO's new approach violates the basic precept of the May 30 Order, namely, that the reference level prices should be market-based, since it is structured in such a way that all but ensures the La Rosita Generators will not be able to meet the new 50% criteria required for Tier 1 market-based reference level pricing and will default to the cost-based Tier 2 or Tier 3 methods.

53. The La Rosita Generators also contend that the CAISO developed its new approach through secret discussions with its outside consultant, Potomac Economics. La Rosita believes this undermined Potomac Economics' independence from the CAISO, in violation of the Commission's directive in the May 30 Order that the reference level bid prices should be developed by an independent entity.

54. The CAISO states, in its reply, that the January 20 revision of the decremental price methodology was not a change that required modification of tariff language, and therefore its implementation does not require a section 205 filing.

55. The CASIO also states that the La Rosita Generators failed to recognize that the January 20 revision was merely Potomac Economics' application of a test to determine what constitutes "competitive conditions." The CAISO argues that this was a matter of interpretation by Potomac Economics of what competitive conditions are. The application of this test did not require any kind of change to CAISO tariff language. Therefore, the CAISO believes, no section 205 filing was required.

56. The CAISO further responds that the La Rosita Generators incorrectly state that the CAISO, rather than Potomac Economics, implemented the revision of the methodology. The CAISO also contends that La Rosita has failed to show any lack of independence on the part of Potomac Economics.

57. Potomac Economics states, in its comments, that the change in the methodology for determining decremental bid reference levels was the responsibility of Potomac Economics, acting in response to a flaw in the initial definition. The purpose of this correction was to limit bid based reference levels to only reflect bids which reflected market competition. Potomac Economics states that it has no interest in any California market participant, and was motivated only by the desire to correct a flaw in the California markets.

### **Commission Discussion**

58. The Commission believes that the La Rosita Generators have not provided sufficient evidence of any conflict of interest or other reason to suspect that the independence of Potomac Economics has been compromised.

59. The Commission disagrees with the assertions of the La Rosita Generators that the May 30 Order stated that reference levels must be market-based. In the May 30 Order the Commission agreed with Intervenors that a reference price was a superior alternative to a cost based proxy.

60. In the May 30 Order, the Commission instructed the same independent entity that determines the reference levels for AMP to develop reference levels for decremental bids. In response to our directive, the independent entity developed a decremental reference level methodology consisting of a 5-tiered approach. The first tier will use accepted market bids as the first option in the hierarchy contained in that methodology. The second tier allows for a consultative approach to the development of decremental bid reference levels. Only if these first two approaches are unavailable or unsuccessful will a cost-based alternative be generated. The methodology developed in response to our May 30 order is market based to a degree and only when there are no bids from periods deemed competitive would other methods be used.

61. The Commission notes that the methodology developed to determine decremental bid reference levels is a 5 tier process for good reason. It was foreseeable that the La Rosita Generators situation, in which adequate market data does not exist to facilitate the calculation of decremental reference bids would result. Thus, if market conditions lead to market information not being available, an alternative method for calculation must be available to the independent entity. It is in this situation that the methodology will default to a subsequent tier in the methodology including a consultative approach. The Commission expects the CAISO and the La Rosita Generators to avail themselves of this tier, if possible, prior to relying on cost-based rates. If consultation is not successful, the La Rosita Generators may bring the matter before the Commission for resolution.

62. The Commission further believes that the changes proposed by Potomac Economics were necessary to correct a fundamental flaw in the proposed decremental

reference bid methodology and we therefore reject the supplemental protest of the La Rosita Generators. We will, however, direct the CAISO to incorporate the new test into section 7.2.6.1.1 of its tariff. This new test would establish an additional criterion, in the context of decremental reference bid calculations, governing when an offer would be deemed to have been accepted in competitive periods and therefore should be explicitly outlined in the CAISO's tariff. The Commission also notes, however, that the La Rosita Generators and other market participants are not prohibited from discussing prospective changes to the methodology utilized in determining the reference levels with the CAISO.

The Commission orders:

(A) The CAISO's compliance filings are accepted in part and rejected in part, as discussed in the body of this order.

(B) The CAISO is hereby directed to make a compliance filing, as discussed in the body of this order, within thirty days of the date of this order.

By the Commission. Commissioner Kelly not participating.

( S E A L )

Linda Mitry,  
Acting Secretary.