139 FERC ¶ 61,207
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Philip D. Moeller, John R. Norris,
and Cheryl A. LaFleur.

California Independent System Operator Corporation — Docket No. ER12-205-000

ORDER GRANTING PETITION FOR WAIVER OF TARIFF PROVISIONS

(Issued June 13, 2012)

1. On October 26, 2011, California Independent System Operator Corporation (CAISO) filed a petition for waiver of certain tariff provisions to the extent that the Commission finds that CAISO acted beyond its tariff authority in connection with its setting of administrative prices and settling of the real-time market in response to the blackout in southern California on September 8-9, 2011. As discussed below, we grant CAISO's petition for waiver.

I. Background and Petition for Waiver

2. The Southwest Power Link is a 500 kV transmission line that runs from the Palo Verde/Hassayampa Substation in Arizona to the Miguel Substation in San Diego County, California, and is the major source of imported power for the San Diego Gas & Electric Company's (SDG&E) service territory. CAISO states that at 3:27 p.m. on September 8, 2011, the Hassayampa-North Gila segment of the Southwest Power Link tripped, which caused a large number of generators to trip. CAISO asserts that as a result, approximately 2.78 million end-use customers lost service, representing approximately 7,900 MW of load within the service territories of SDG&E and several neighboring balancing authority areas.[1] CAISO states that it declared a system emergency at 4:19 p.m.

[1] CAISO Petition at 2. On May 1, 2012, a joint inquiry team of Commission and North American Electric Reliability Corporation staff issued a report, which described the causes of the September 8 event and made recommendations to prevent similar events

(continued…)

3. CAISO states that during the hours of 4:00 to 6:00 p.m., it instructed generators to remain at their day-ahead schedules and issued verbal exceptional dispatches for additional energy.[2] CAISO explains that when it ran the real-time market for this initial period following the event, the software produced extremely anomalous results, such as locational marginal prices (LMPs) in the SDG&E area as high as $24,410 and prices in the rest of the state as low as negative $782. CAISO states that because of these anomalous results, it settled the real-time market using the LMPs from the last interval prior to the market dysfunction (hour ending 1600, interval 10, or 3:50 p.m.), consistent with its price correction methodology in section 35 of its tariff. CAISO states that it issued a market notice on September 13 setting forth this price, which was approximately $54 per MWh in the SDG&E area.[3]

4. CAISO notes that, effective at 6:00 p.m., it intervened and suspended real-time market operations pursuant to section 7.7.4 of its tariff and announced an administrative price of $250 per MWh for the whole market. CAISO lowered the administrative price to $100 per MWh effective 10:00 p.m. CAISO explains that it set these prices because it concluded that the default administrative price in section 7.7.4(3) of its tariff (the last good interval prices, for example, $54 per MWh in the SDG&E area) would not have sufficed to provide an incentive for sufficient generation. CAISO states that it resumed market operations and terminated the administrative price outside of the SDG&E area at 1:00 a.m. on September 9, and resumed normal market operations for all areas at 4:00 a.m.

5. CAISO states that on September 9 it announced its decision to further revise certain settlements in order to hold harmless generation and load in southern California that were forced to trip for failure to comply with their day-ahead schedules due to this event. Specifically, CAISO explains that it would set the real-time price for generation and load that tripped during the outage equal to the day-ahead price for the same time

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from occurring in the future. *See* Arizona-Southern California Outages on September 8, 2011, Causes and Recommendations (April 2012), *available at* http://www.ferc.gov/legal/staff-reports/04-27-2012-ferc-nerc-report.pdf.

[2] Exceptional dispatch is an involuntary backstop mechanism that enables CAISO to manually commit and/or dispatch resources that are not cleared through its market software in order to maintain reliable grid operations. CAISO Tariff § 34.9.

[3] The 3:50 p.m. price for the Pacific Gas and Electric Company (PG&E) area was approximately $29 per MWh. The price for the Southern California Edison Company (SoCal Edison) service area was approximately $53 per MWh. CAISO Petition, Declaration of Deborah Le Vine, Exhibit No. 1A.

period, effectively zeroing out these resources in order to hold harmless for failure to comply with their day-ahead schedules.

6. CAISO states that it performed a market analysis on the cost to the market of its pricing actions.[4] According to CAISO's estimates, the cost to the market of using the administrative prices and holding harmless tripped generation and load is approximately $2.8 million higher than settling the market using last valid interval prices and not holding harmless tripped load and generation. CAISO states that virtually all of the additional cost is borne by the load and exports that continued to receive service during the system emergency. CAISO states that, although not taking these pricing actions would result in a lower cost to the market, it would only be due to an inequitable wealth transfer from tripped generation to tripped load.

7. CAISO states that it believes that its decisions to establish administrative prices at $250 and $100 per megawatt hour and to hold harmless tripped generation and load were within its authority under its tariff. To the extent the Commission disagrees, CAISO requests a waiver of the relevant tariff provisions, as discussed further below.

8. Finally, CAISO acknowledges that its tariff provisions regarding the nature of market intervention in the event of a significant system emergency and the settlement implications of a force majeure event need clarification or revision. Accordingly, CAISO states that it intends to convene a stakeholder process, within 30 days of the date of the Commission's order in response to this filing, to consider tariff clarifications and revisions to be filed with the Commission at a later date.

II. Notice of Filing and Responsive Pleadings

9. Notice of the petition for waiver was published in the *Federal Register*, 76 Fed. Reg. 69,257 (2011), with interventions and comments due on or before November 16, 2011. Timely motions to intervene were filed by: Imperial Irrigation District; J.P. Morgan Ventures Energy Corporation; Modesto Irrigation District; the City of Santa Clara, California and MSR Public Power Agency; and Dynegy Moss Landing, LLC, Dynegy Morro Bay, LLC, Dynegy Oakland, LLC and Dynegy Marketing and Trade, LLC. Timely motions to intervene and comments were filed by: the Western Power Trading Forum (WPTF); Powerex Corp. (Powerex); and the California Department of Water Resources State Water Project (SWP). Timely motions to intervene and protests were filed by: SESCO Enterprises LLC and XO Energy, LP (collectively, Financial Marketers); Macquarie Energy LLC (Macquarie); Morgan Stanley Capital Group Inc.

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[4] *See* CAISO Petition at 9-12.

(MSCG); and El Segundo Power, LLC, Cabrillo Power I LLC, Cabrillo Power II LLC, and Long Beach Generation LLC (collectively, NRG Companies).

10. CAISO filed an answer to the comments and protests. Financial Marketers and MSCG filed answers to CAISO's answer.

11. Motions to intervene out of time were filed by SoCal Edison and PG&E.

III. Discussion

A. Procedural Matters

12. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2011), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

13. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2011), prohibits answers to a protest and/or an answer unless otherwise ordered by the decisional authority. We will accept CAISO's answer and Financial Marketers' and MSCG's answers because they have provided information that assisted us in our decision-making process.

14. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2011), the Commission will grant the untimely, unopposed motions to intervene of SoCal Edison and PG&E given their interest in the proceeding, the early stage of this proceeding, and the absence of undue prejudice or delay.

B. Pricing During the Hours of 4:00 to 6:00 p.m.

1. CAISO

15. CAISO explains that it corrected the prices produced by real-time market during the hours of 4:00 to 6:00 p.m., prior to market suspension, because its software did not produce results consistent with actual conditions and produced extremely anomalous prices, such as prices in the SDG&E service area as high as $24,410 and prices in the rest of the state as low as negative $782. CAISO argues that by settling the prices for the 4:00 to 6:00 p.m. period at the last valid interval prices, it acted within its authority under sections 7.7.15.1 and 35 of its tariff.[5] Specifically, CAISO explains that between

[5] Section 7.7.15.1 lists administrative pricing tools that CAISO may use in the event of a market disruption. Section 35 establishes CAISO's authority to correct invalid prices in the event of a software failure.

4:00 and 6:00 p.m., software failures and blocks occurred during some intervals, triggering administrative pricing under section 7.7.15.1. For the rest of the intervals during this period, CAISO states that it is using its price correction authority under section 35 of its tariff. CAISO is using the same price – the prices from the last valid interval – for both administrative pricing and price correction during this period.

2. Protests

16. Protesters argue that CAISO does not have authority under its tariff to intervene in the market and correct the prices for the 4:00-6:00 p.m. settlement period because CAISO has not proven that the market produced erroneous results. Financial Marketers list several factors that they claim contributed to high prices in the SDG&E service area: (1) September 8, 2011, was one of the hottest days of the year, (2) significant transmission work was being conducted on the system at the time of the outage and (3) one of the largest nuclear units in the CAISO system was down for a planned outage, accounting for a loss of 1,122 MW of baseload generation. In addition, Financial Marketers state that the North Gila-Hassayampa line remained out of service for several days, which they argue is evidence that the outage was a transmission issue and not a modeling error that needs to be corrected by establishing an arbitrary administrative price.[6] MSCG and Financial Marketers argue that the CAISO Petition does not contain the information necessary to demonstrate that its software actually generated incorrect market prices during the system emergency. MSCG explains that the extremely low prices outside of the SDG&E service area represent the fact that supply greatly exceeded demand, a price decrease intended to encourage excess generation to shut down.[7]

17. Protesters also dispute CAISO's decision to price the 4:00-6:00 p.m. settlement period differently than the period during which it suspended the market. Financial Marketers ask that the Commission direct CAISO to develop prices that seek to treat all parties in a just, reasonable, and not unduly discriminatory manner, such as using the prices from the prior day for each parallel hour. Macquarie suggests that CAISO re-run the market with data that reflects the conditions that existed at the time of the emergency, clarifying that the last valid interval price CAISO applied to the 4:00-6:00 p.m. settlement period did not adequately account for the scarcity value of energy. MSCG requests that CAISO use the actual prices the market produced or calculate new LMPs for the intervals during the system emergency. If CAISO is unable to recreate these prices, protesters request that the Commission require CAISO to apply the $250 per MWh price to the 4:00-6:00 p.m. settlement intervals.

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[6] Financial Marketers Protest at 13-14.

[7] MSCG Protest at 8.

18. In addition, MSCG asserts that CAISO's revision after the fact of the 4:00-6:00 p.m. interval prices to settle at the last valid interval price constitutes retroactive ratemaking in violation of the Federal Power Act (FPA). MSCG warns that market participants may refrain from participating in the market during emergency conditions if the Commission does not require CAISO to honor the prices it posts.

3. CAISO Answer

19. CAISO dismisses protesters' arguments concerning its decision to settle the 4:00-6:00 p.m. period at the last valid interval price as beyond the scope of this proceeding, asserting that its petition pertains only to waivers for the administrative prices it set beginning at 6:00 p.m. and its decision to hold harmless tripped generation and load resources.[8] Regardless, CAISO contends that their arguments remain without merit.

20. CAISO argues that the high prices its market software produced for the SDG&E area during the system emergency were, in fact, anomalous because the market software received inconsistent network topology information which indicated that stations inside the SDG&E area were disconnected or "islanded off" from the rest of the CAISO grid, while at the same time indicating that generation and load that had tripped remained connected. Thus, CAISO contends that the prices its market software produced were erroneous because no matter what the price in the SDG&E area was, there was neither connected load to serve nor was there connected generation to serve this load. Based on the fact that these resources were disconnected, CAISO disagrees with Macquarie that the administrative price it established should have reflected scarcity conditions. CAISO explains that following the system disturbance, resources were not scarce; instead, these resources were disconnected from the system entirely.

21. CAISO explains that when the system disruption occurred, it did not suspend that market or set a prospective administrative price beginning at 4:00 p.m. Instead, CAISO states that the prices it applied for this period were established after the fact, under sections 7.7.15.1 and 35 of its tariff. CAISO states section 7.7.15.1 provides for the use of administrative prices for market disruptions caused by software failures, which occurred during some of the intervals in the 4:00-6:00 p.m. period. CAISO states for the intervals not subject to market disruption, it used its price correction authority under section 35. CAISO argues that, because of the number of nodal prices affected during these hours, it would not have been feasible to conduct isolated price corrections or to

[8] CAISO notes that protesters who believe that it has violated its tariff with respect to the 4:00-6:00 p.m. settlement period should file a complaint with the Commission. CAISO Answer at 18, 22.

generate reasonably accurate data to rerun the market for this period that would produce a realistic solution. Accordingly, CAISO states, it used replicated prices – specifically the last good interval – consistent with section 8.1.5.4 of its Business Practice Manual.

22. CAISO also contends that MSCG's request that it disclose the information it used to determine that exceptional dispatch and day-ahead schedules were insufficient to manage the system emergency as beyond the scope of this proceeding. CAISO explains that it could not rely solely on day-ahead schedules because not all generators have day-ahead schedules. Also, CAISO asserts that while it did use exceptional dispatch during the system emergency, it would have been impractical and extremely inefficient to verbally dispatch the over 1,500 generating units in its balancing authority area. CAISO adds that its grid operators need to make decisions immediately following system disturbances and do not have time to conduct and analyze the system studies as MSCG suggests. Further, CAISO rejects MSCG's argument that its decision to set the 4:00-6:00 p.m. settlement prices at the last valid price constitutes retroactive ratemaking in violation of the FPA. CAISO argues that its actions were consistent with its tariff's directives, particularly sections 7.7.15.1 and 35.4 which provide adequate notice to permit retroactive rate adjustments.

23. CAISO objects to protesters' requests that the Commission direct it to set the 4:00-6:00 p.m. settlement price at the $250 per MWh administrative price. CAISO explains that using the last valid interval price for the 4:00-6:00 p.m. settlement period is appropriate because, at that time, it had not yet suspended the market. Thus, CAISO asserts that the price for this period, as directed by the tariff, should be the last valid interval price. CAISO adds that retroactively assigning the $250 per MWh administrative price to the 4:00-6:00 p.m. would not create the same price incentive CAISO intended to create by setting that price upon suspending the market.

4. <u>Financial Marketers and MSCG Answers</u>

24. Financial Marketers maintain that CAISO has not adequately demonstrated how the market-produced prices were inaccurate. Financial Marketers contend that the load data from September 8-9 shows that normal, expected market conditions caused fluctuations in market prices, as September 8, 2011, was one of the three highest forecasted load days for the year in southern California. Thus, Financial Marketers assert that tariff section 35.4, which addresses CAISO's price correction authority, only applies if a data input, hardware, or software failure has occurred, or if the market result is inconsistent with the CAISO tariff, is not applicable because CAISO has not shown that any of these events have occurred.

25. Financial Marketers maintain that CAISO's disparate treatment of the 4:00-6:00 p.m. settlement period is unduly discriminatory and inconsistent with tariff section 7.7.15.1. Financial Marketers argue that because this time period fell within the same peak period during which CAISO applied the $250 per MWh administrative price,

it is illogical for CAISO to claim that a lower price during the 4:00-6:00 p.m. settlement period was sufficient to incent generation. Further, Financial Marketers assert that CAISO's settlement of the 4:00-6:00 p.m. period is not beyond the scope of this proceeding, maintaining that all pricing decisions CAISO made during the emergency are fully within the scope of the proceeding and the Commission's jurisdiction. Lastly, Financial Marketers contend that requiring parties to initiate a separate proceeding to address the 4:00-6:00 p.m. settlement period would be unduly costly and burdensome.

26. MSCG contends that CAISO attempts to marginalize its opposition in this proceeding by stating that "[t]he protesters are all financial market participants" and arguing that the financial market participants were somehow less harmed than other market participants. MSCG objects to this characterization as a misrepresentation of its market activity, arguing that it is a full-fledged participant in all the markets in the west, owns and operates power plants and engages in physical power transactions.

5. Commission Determination

27. We find that CAISO's decision to set the 4:00-6:00 p.m. settlement price at the last valid interval price is consistent with sections 7.7.15.1 and 35 of its tariff. We find that CAISO's pricing decisions for this period are not unduly discriminatory and do not violate the FPA. Further, we disagree with protesters that CAISO should file additional information to substantiate the occurrence of this market disruption and revise its settlement of the pre-market suspension period, as discussed below.

28. Section 7.7 of CAISO's tariff describes how CAISO should manage system emergencies. Section 7.7.15.1 lists administrative pricing as a tool CAISO may use in the event of a market disruption. It is clear from CAISO's representations that market disruptions occurred during this period. Thus, we agree with CAISO that its application of administrative pricing from 4:00-6:00 p.m. is consistent with section 7.7.15.1 of its tariff.

29. We find that this price is also consistent with CAISO's price correction procedures listed in tariff section 35, which establishes CAISO's authority to correct invalid prices in the event of a software failure.[9] Based on CAISO's representations, we find that CAISO has adequately demonstrated that its software failed by generating prices based on physically disconnected load and generation resources.

[9] Section 35.4 of CAISO's tariff states that CAISO can correct invalid market prices in the event of data input failure, a hardware or software failure, or a result that is inconsistent with the CAISO Tariff.

30. We disagree with protesters' assertions that CAISO did not follow the price correction methodology set forth in section 35.5 of CAISO's tariff. Section 35.5 prescribes specific price correction methodologies and section 8.1.5 of CAISO's Business Practice Manual explains CAISO's price correction authority in detail. Section 8.1.5.4 of CAISO's Business Practice Manual states that when both isolated price correction and market re-run actions are not feasible or not practical, CAISO may replicate real-time market prices using market solutions from within the same trading hour as the invalid market price or from an adjacent trading hour.[10] As discussed above, both software failures and blocked intervals occurred during the 4:00-6:00 p.m. settlement period that rendered the market results CAISO retained nonexistent or inconsistent with system requirements.[11] Due to the number of nodal prices affected by the software failures and blocked intervals, we agree with CAISO that it would have been infeasible to conduct price corrections for all the affected intervals during this period. Additionally, we agree that any rerun of the market would have produced arbitrary and potentially unrealistic price solutions absent having reasonably accurate system data. Therefore, we find that CAISO appropriately applied the market price from the 3:50 p.m. interval, the last settlement interval before the market disruption occurred, beginning at 4:00 p.m.

31. In addition, while certain market participants' financial positions may have been impacted by CAISO's decision to apply the last valid interval price to this period, we do not believe that CAISO's actions were unduly discriminatory. As discussed above, CAISO's use of administrative pricing and price correction for the 4:00-6:00 p.m. period were reasonable substitutions given the facts, and were not inconsistent with sections 7.7.15.1 and 35 of its tariff.

32. Lastly, we disagree with protesters that CAISO's application of the last valid interval price constitutes retroactive ratemaking in violation of the FPA. Section 35.2 of the CAISO tariff states that the price correction process for each trading day shall end no later than 5:00 p.m. of the fifth calendar day following that trading day. As described in the petition, CAISO announced that it would correct the market prices for the 4:00-6:00 p.m. settlement period at 1:55 p.m. on September 13, 2011. We find that CAISO's settlement of the 4:00-6:00 p.m. does not violate the FPA because it meets the price correction time horizon guidelines in its tariff. We also note that the Commission found the price correction guidelines necessary to ensure greater price certainty before the price becomes final.[12] Therefore, we reject protesters' arguments regarding CAISO's

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[10] These are the price correction methodologies specifically listed in section 35.5 of the CAISO tariff.

[11] CAISO Petition at 4, fn. 2.

[12] *See, e.g., Cal. Indep. Sys. Operator Corp*., 132 FERC ¶ 61,269, at P 16 (2010).

settlement of the pre-market suspension period and find that CAISO's use of price correction and administrative pricing is consistent with its tariff.

C. Stated Administrative Prices During Market Suspension

1. CAISO

33. CAISO states that section 7.7.4 of the CAISO tariff authorizes it to intervene in the market and set an administrative price in the event of a system emergency. Subsection (3) states that the administrative price will be set "at the applicable price in the Settlement Period immediately preceding the Settlement Period in which the intervention took place." CAISO explains that once it suspended the market at 6:00 p.m., it instituted a $250 per MWh administrative price as an economic incentive to encourage sufficient generation to stay online and restore the system. Once the supply/demand situation stabilized, CAISO lowered the administrative price to $100 per MWh effective at 10:00 p.m.

34. To justify its actions, CAISO argues that tariff section 7.7.4(3) should be read in light of its broader authority in section 7.7.2, which states that during a system emergency, "CAISO shall take such action as it considers necessary to preserve or restore stable operation of the CAISO Controlled Grid . . . as quickly as is reasonably practicable." CAISO argues that section 7.7.2 should be read to permit revision of the administrative price. Also, CAISO contends that it needed to maintain sufficient capacity online in order to "restore reliable, safe, and efficient service as quickly as is reasonably possible," but it was not feasible to issue exceptional dispatches to all the resources necessary to provide the capacity and energy. CAISO states that section 42.1.5 reinforces this authority by authorizing it to "...take such steps as it considers necessary to ensure compliance, including the negotiation of contracts through other than competitive solicitations."

35. In the event that the Commission does not agree that CAISO has the tariff authority to set the stated administrative prices, CAISO requests waiver of section 7.7.4(3), arguing that its request meets the Commission's criteria for waivers. CAISO contends that the requested waiver is of limited scope, results in evident benefits to customers, and has no undesirable consequences. CAISO explains that the requested waiver is of limited scope because it would apply only to the settlement intervals for a less than twelve-hour timeframe. According to CAISO, the benefits to customers are also readily apparent; CAISO states that by establishing the administrative price, it was able to maintain generation that was sufficient to restore normal system operations within 10 hours. Lastly, CAISO adds that if its pricing actions violate its tariff, such violation was the result of an unintentional error. CAISO explains that it acted in reliance on

Operating Procedure 1710, which explicitly stated that CAISO operations shift supervisor has the authority to revise the administrative price. CAISO states that at the time of the emergency, it was not aware that its tariff did not contain such explicit authority.[13]

36. CAISO argues that to now inform generation that it will not be paid according to the price signal would be inequitable and would interfere with future efforts to attract generation during a system emergency, which could jeopardize reliability. According to CAISO's market impact analysis, the estimated total cost to the market is approximately $2.8 million, which, in its opinion, supports the conclusion that there are no undesirable consequences.

2. **Protests**

37. Financial Marketers and MSCG argue that CAISO violated section 7.7.4(3) of its tariff, which states that in the event of a system emergency, CAISO can intervene and set an administrative price that is the applicable price in the settlement period immediately before the settlement period in which the intervention took place. They argue that CAISO has not explained how it reached the particular dollar figure for the $250 and $100 per MWh administrative prices or why it did not follow the tariff's guidelines for system emergencies. They disagree that section 7.7.2 gives CAISO the authority to revise the administrative price, arguing that section 7.7.2 does not override the directives of section 7.7.4(3). Financial Marketers allege that CAISO has not explained why the last interval price was insufficient to incent generation capacity to remain online and why its chosen $250 per MWh administrative price was better. Financial Marketers also assert that CAISO has failed to explain why it reduced the administrative price to $100 per MWh at 8:56 p.m. and chose not to restore the market until 12:36 a.m. the next day.

38. MSCG argues that CAISO does not support its conclusion that it was impractical to use exceptional dispatch or rely on day-ahead schedules to keep generation online after the system disruption. To rectify this issue, MSCG states that the Commission should direct CAISO to provide the "available information" its staff used to determine that such market tools were impractical.

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[13] Operating Procedure 1710, at the time of the emergency, contained a provision stating: "Administrative Prices may be changed by Shift Supervisor or the Director of Grid Operations depending on system conditions and the duration of the System Emergency." In October 2011, CAISO removed that provision to make it consistent with the tariff.

39. NRG Companies support CAISO's reasoning behind setting administrative prices in order to attract the supply needed to restore the system.[14] However, NRG Companies state that CAISO should apply administrative prices to certain intertie nodes because reducing the amount of power being imported into CAISO's balancing authority area would have helped CAISO manage the aftermath of the disturbance.

40. In regard to CAISO's request for waiver, Financial Marketeers argue that there are no grounds for granting the requested waiver. According to Financial Marketeers, the outage in question does not qualify as an emergency and the petition does not meet the Commission's criteria for granting waiver, which requires that the waiver be of limited scope, result in evident benefits to customers, and not have undesirable consequences.

41. Financial Marketeers disagree with CAISO that the waiver request is of limited scope, asserting that the administrative prices CAISO set apply to the entire California market when the outage only affected 10 percent of load. Financial Marketeers also contend that the waiver request does not benefit customers and has undesirable consequences. Financial Marketeers argue that the waiver will create long-term uncertainty in the market because market participants will have no incentive to participate in a market where the rules can unexpectedly change. Financial Marketeers add that this uncertainty will particularly discourage virtual bidders, who provide necessary liquidity, from participating in the market. Lastly, Financial Marketeers contend that the waiver would discriminate against convergence bidders.

42. In addition, Financial Marketeers claim that the waiver petition is premature because the inquiry into the cause of the system emergency is incomplete.

3. <u>CAISO Answer</u>

43. CAISO explains that it set the administrative price at $250 per MWh by applying its grid operators' experience and engineering judgment to the information available, which included the amount of generation needed, real-time bids, and generator operating costs, in a real-time setting. CAISO claims that subsequent analysis of bid data confirms that the $250 per MWh price was reasonable. CAISO states that, if the Commission determines that CAISO violated its tariff and denies its waiver request, it will resettle the market at the price for the last valid interval, as described in CAISO tariff section 7.7.4(3).[15]

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[14] NRG Companies Protest at 4.

[15] The last valid interval is hour ending 1600, interval 10. CAISO Answer at 10.

44. CAISO explains that it could not rely on day-ahead schedules because not only do prices differ in the day-ahead and real-time market, but not all generators have day-ahead schedules. CAISO asserts that even though it did use exceptional dispatch during the system emergency, verbally dispatching more than 1,500 generating units in its footprint would have been impractical and inefficient.

45. In addition, CAISO states that its settlement procedures provide for intertie resources that received verbal dispatch instructions to receive exceptional dispatch settlement. CAISO also clarifies that imports that followed their hour-ahead schedules will be eligible for bid cost recovery and exports will be made whole to their bid costs to the extent that prices were different from the published prices. CAISO also asserts its confidence that any transactions that were incorrectly settled will be corrected through the dispute resolution process.

46. CAISO disputes Financial Marketers' argument that its waiver request does not meet the Commission's standard for granting waiver. First, CAISO argues that the September 8-9 was clearly an emergency, as it was the largest outage in the Western Interconnection since 1996. Second, CAISO asserts that the waiver request is, in fact, limited in scope because it involves a period of less than twelve hours. Lastly, while its actions have led to financial losses for some market participants, CAISO maintains that certain financial market participants are better off under the administrative prices it chose. CAISO also argues that if it had applied the settlement price, as provided in CAISO tariff section 7.7.4(3), market prices would have been much lower and as a result, convergence bidders would have seen smaller gains.

4. Financial Marketers Answer

47. Financial Marketers contend that CAISO has not sufficiently explained how it determined the administrative prices it set and why it revised this price three times in six hours. Pointing to CAISO's statement that it used its judgment and experience to apply administrative pricing in real-time, Financial Marketers argue that the CAISO tariff instead lays out specific procedures to follow when setting such prices. Financial Marketers assert that CAISO's argument that the $54 per MWh price for the period preceding the outage showed that ample supply was available to meet demand contradicts its claim that it was necessary to increase the market price to $250 per MWh later during the same peak period.

5. Commission Determination

48. The Commission finds that the administrative prices of $250 and $100 per MWh are not authorized by CAISO's tariff. Section 7.7.4(3) explicitly sets the administrative price at the level of the applicable price for the last valid settlement period which in the SDG&E area, for example, was $54 per MWh. We disagree with CAISO that the discretion provided in section 7.7.2 to take any action it "considers necessary" relieves

CAISO of its requirement to comply with section 7.7.4(3) when setting the administrative price. Section 7.7.4(3) should be read in conjunction with section 7.1.3(h) that confers upon CAISO general authority to operate resources in a system emergency. If section 7.7.2 could be read as expansively as CAISO argues, then CAISO would have virtually unfettered discretion to rely on that section to justify any action or behavior in an emergency situation. That section explicitly provides that such authority is subject to the CAISO tariff and, thus, not discretionary, as CAISO suggests.

49. However, we will grant a one-time waiver of section 7.7.4(3) of CAISO's tariff to allow the $250 per MWh and $100 per MWh administrative prices. The Commission has found good cause to grant waiver where the waiver is of limited scope, where there are no undesirable consequences, or where there are resultant benefits to customers.[16] In addition, the Commission has granted certain waiver requests involving an emergency situation or an unintentional error.[17]

50. The September 8-9 blackout was a major emergency where several million people were without power. The event was also the largest loss of load event in California since 1996. The Commission believes that CAISO, in this emergency situation, took the actions it believed were necessary in order to ensure the reliability of the grid. CAISO set prices it thought necessary to encourage generation to be available to prevent the blackout from spreading further and to restore power in the SDG&E area as quickly as possible. Furthermore, we find that waiver is limited in scope, as it will apply to less than 12 trading hours. While the estimated $2.8 million cost to the market is not *de minimis*, we find that the overall financial impact of the waiver on the market is limited compared to the economic and social consequences of a massive blackout.

51. In regard to Financial Marketers' opposition to the requested waiver, we note that the administrative prices set by the CAISO for the intervals in question applied to transactions in both physical and financial markets. Financial Marketers have failed to

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[16] *See, e.g., Cal. Indep. Sys. Operator Corp*., 118 FERC ¶ 61,226 (2007); *Cal. Indep. Sys. Operator Corp.*, 124 FERC ¶ 61,031 (2008); *Cal. Indep. Sys. Operator Corp.*, 132 FERC ¶ 61,132 (2010); *Cal. Indep. Sys. Operator Corp.*, 133 FERC ¶ 61,020 (2010); *Coso Energy Developers*, 134 FERC ¶ 61,088 (2011).

[17] *See, e.g., ISO New England Inc.*, 117 FERC ¶ 61,171, at P 21 (2006) (granting limited and temporary change to tariff to correct an error); *Great Lakes Transmission L.P.*, 102 FERC ¶ 61,331, at P 16 (2003) (granting emergency waiver involving *force majeure* event for good cause shown); *TransColorado Gas Transmission Co.*, 102 FERC ¶ 61,330, at P 5 (2003) (granting waiver for good cause shown to address calculation in variance adjustment).

demonstrate that they were treated differently from the rest of the market and thus suffered a disproportionately greater impact. We also disagree with Financial Marketers' argument that the last valid interval price was sufficient to maintain adequate supply following the market suspension at 6:00 p.m. CAISO concluded that it would need approximately 42,800 MW of supply to restore load, but could only support approximately 40,700 MW at the last best interval price of $54 per MWh.[18] CAISO concluded that a $250 per MWh price would allow for sufficient generation to maintain service outside of the SDG&E area and to restore service in the SDG&E area.[19] Therefore, we find that it was not unreasonable for CAISO to conclude that raising the price to $250 per MWh was necessary in order to maintain sufficient generation. Furthermore, CAISO's subsequent analysis of bid data demonstrates that by setting the $250 per MWh administrative price, CAISO was responding to the existing market conditions and the choice of the price level was well calculated and not random.[20]

52. Finally, the Commission believes that CAISO's commitment to revise this tariff language to avoid confusion in the event of a similar emergency or market disruption in the future through an upcoming stakeholder process, as discussed further below, will address this issue going forward. Accordingly, we grant CAISO's request for waiver of section 7.7.4(3) in order to allow the $250 per MWh and $100 per MWh administrative prices.

D. Holding Harmless Tripped Generation and Load

1. CAISO

53. CAISO proposes to hold harmless tripped load and generation resources in the SDG&E service area, contending that the outage constituted an Uncontrollable Force (*i.e.*, force majeure) that caused tripped generators and load to be unable to meet their obligation to perform in accordance with their day-ahead schedules.[21] CAISO explains

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[18] CAISO Petition at 15.

[19] CAISO Petition, Exhibit 2 – Declaration of Mark A. Rothleder at 7.

[20] *Id*. at 7-9.

[21] Appendix A - Master Definition Supplement of the CAISO tariff defines an Uncontrollable Force as follows:

> any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or

(continued…)

that under section 11.5.2, market participants would be charged or paid for uninstructed imbalance energy based on their day-ahead schedule; however, section 14.1 of its tariff states that a market participant will not be considered in default of any obligation under the tariff if an Uncontrollable Force prevented the market participant from fulfilling its obligation. CAISO contends that the there is no question that this emergency was an Uncontrollable Force and that the generators and load could not have avoided being tripped. Thus, CAISO argues that they should be relieved of their obligation to perform in accordance with their day-ahead schedules.

54. Alternatively, CAISO requests that, in the event that the Commission does not agree with its conclusion that the tripped generators and load qualify for relief under section 14 of its tariff, the Commission waive the requirements of section 11.5.2. In support, CAISO argues that this requested waiver would be of a limited scope, applying only to a subset of generators for a very limited period, and would benefit customers by relieving them of obligations with which they could not comply. CAISO states that although holding harmless tripped generation and load does shift costs from generation and imports to load and exports, and from load in SDG&E's area to load elsewhere in the state, this action is consistent with cost causation. CAISO explains that the generators were unable to deliver according to their day-ahead schedules for reasons beyond their control, and cannot therefore have caused or benefitted from CAISO's establishment of an administrative price. CAISO also states that load outside of southern California benefitted by CAISO's actions, which ensured the availability of adequate generation to maintain service to that load.

2. **Protests**

55. Financial Marketers strongly disagree with CAISO's classification of the September 8-9 event as "force majeure" under section 14.1 of its tariff. Financial Marketers argue that contrary to CAISO's assertions, Commission precedent does not support the inclusion of forced outages in the definition of "force majeure" events. Financial Marketers argue that an outage caused by predictable and predicted heat, on a day when significant work was being conducted on the transmission system, does not fall under this definition. According to Financial Marketers, high prices were driven by congestion and were the result of actual market conditions. Financial Marketers also contend that because September 8, 2011, produced the highest peak day-ahead clearing prices of the year in southern California, the market and CAISO clearly anticipated congestion for that day due to tight supply and high demand. Financial Marketers

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> lawfully established civilian authorities or any other cause beyond the reasonable control of the CAISO or Market Participant which could not be avoided through the exercise of Good Utility Practice.

conclude that because September 8, 2011, was expected to produce high congestion and tight supply, the price increase was not an unpredictable catastrophe.

56. Financial Marketers argue that CAISO's decision to hold harmless the generation, imports, exports, and load resources that were forced to trip in southern California for their failure to comply with their day-ahead schedules is unduly discriminatory towards convergence bidders. Financial Marketers explain that convergence bidders must pay the day-ahead prices they have bid regardless of the circumstances. Financial Marketers add that such action eliminates the actual, real-time constraints and flattens day-ahead price constraints, which further discriminate against convergence bidders. If CAISO is to apply new prices, Financial Marketers contend that these prices should be those experienced in the market so that all market participants are treated comparably and fairly. Otherwise, by applying preferential prices, Financial Marketers argue that CAISO is in violation of section 205(b) of the FPA.

57. Financial Marketers further state that the causes of the system emergency are extremely important in evaluating whether CAISO's actions constitute a reasonable solution to the problem. Without this information, Financial Marketers assert that the Commission does not have the facts necessary to determine if CAISO acted appropriately given the circumstances.

58. Macquarie considers CAISO's decision to hold harmless generation, exports, imports, and load resources in southern California as additional evidence that CAISO has inconsistently applied administrative prices to the detriment of other market participants, such as convergence bidders.[22] NRG Companies support CAISO's decision to hold harmless tripped generation and load in the SDG&E service area during the system disturbance. WPTF questions that decision and argues that market participants in the SDG&E service area should not be treated differently from the rest of the market.

59. Financial Marketers also object to CAISO's alternative request for waiver of section 11.5.2 that requires settlement of uninstructed imbalance energy based on the day-ahead schedule. Financial Marketers note that the Commission has historically granted waiver in the event of an emergency situation or unintentional error; however, Financial Marketers argue that no emergency occurred in southern California and that if the resulting prices constitute an unintentional error, CAISO's solution should not discriminate against certain market participants.

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[22] Macquarie Protest at 8.

3. CAISO Answer

60. In response, CAISO argues that it has appropriately categorized the outage as a "force majeure event," contrary to Financial Marketers' assertion. CAISO explains that its tariff defines an "uncontrollable event" as a cause beyond the control of market participants that cannot be avoided by the exercise of good utility practice. According to CAISO, this definition includes an unlimited number of circumstances and the event need not be akin to the specific examples listed in the tariff. Further, CAISO asserts that regardless of what caused the outage, the exercise of good utility practice could not have prevented load and generation resources from being tripped or dropped.

61. CAISO further argues that Financial Marketers do not explain how the likelihood of a high congestion, tight supply day would provide market participants with notice that they would be unable to meet their day-ahead obligations. Further, CAISO argues that the prevailing price of $54 per MWh in the last valid interval demonstrates that immediately preceding the system disturbance, there was ample supply to meet demand and no reason to expect sudden scarcity.

62. CAISO argues that its proposal to hold harmless tripped load and generation resources in the SDG&E service area is not discriminatory because these resources are situated differently than the remainder of market participants. CAISO explains that these resources tripped at no fault of their own and, unlike financial market participants, have an obligation to perform. However, CAISO contends that because the market failure created winners and losers in the financial market at random, these market participants should neither gain nor lose. Thus, CAISO states that it is amenable to a Commission order directing it to zero out all positions during the market suspension, effectively holding harmless financial market participants.

4. Financial Marketers Answer

63. In response to CAISO's answer to protests, Financial Marketers argue that zeroing out such positions will not actually hold harmless virtual bidders because they incurred costs and committed substantial capital in order to participate in the market in the first place. Financial Marketers also object to CAISO's justification for treating financial and physical market participants differently as two differently situated markets. Financial Marketers argue that whether or not a market participant has the obligation to provide physical supply or serve end-use load, all market participants, physical or financial, are subject to the same tariff requirements, market rules, and settlement obligations.

5. Commission Determination

64. In its filing, CAISO argues that tripped load and generation should be excused from its obligation under section 11.5.2 to perform in accordance with their day-ahead schedules because the system outage constitutes an Uncontrollable Force under

section 14.1 of CAISO's tariff. We need not find whether the system outage constitutes an Uncontrollable Force because, as discussed below, we find there is good cause to grant CAISO waiver of section 11.5.2 of its tariff.

65. We are persuaded by CAISO's representations that there is good cause to grant its request for waiver of section 11.5.2 of its tariff. As we discussed above, the September 8-9 event constituted an emergency situation when tripped generators and load were physically unable to meet their obligations to perform in accordance with their day-ahead schedules. Without holding harmless these resources, tariff section 11.5.2 calls for CAISO to settle each resource's deviation from its day-ahead schedule at the administratively-set real-time price. This scenario would effectively penalize generators for failing to perform to their day-ahead schedules and result in a windfall for load that was not served. A waiver to allow CAISO to hold harmless the tripped load and generation in SDG&E service area would prevent such inequitable outcome. We, therefore, grant CAISO's request for waiver of section 11.5.2 of its tariff.

66. In regard to CAISO's proposal to zero out Financial Marketers positions similarly to the tripped generation and load, we believe that Financial Marketers' positions should be settled at the administrative prices CAISO applied to the rest of the market, to ensure the equal treatment of participants in the physical market and financial market.

67. While we will grant CAISO's request for waiver of tariff section 11.5.2 to allow tripped generation and load to be held harmless from uninstructed imbalance energy, market participants are advised that they still may face penalties if the Commission ultimately finds a violation by a user, owner, or operator with regard to the outage.

E. Future Tariff Revisions and Stakeholder Process

1. CAISO

68. CAISO states that it recognizes that the tariff provisions regarding the nature of market intervention in the event of a significant system emergency and the settlement implications of a force majeure event need clarification or revision. Accordingly, CAISO states that it intends to convene a stakeholder process, within 30 days from the date of the Commission's order in response to this filing, to consider tariff clarifications and revisions to be filed with the Commission at a later date.

2. Protests

69. Powerex, WPTF and NRG argue that CAISO needs to revise its tariff to clearly set forth CAISO's actions and to govern the prices CAISO should use during system emergencies of a similar nature. For instance, Powerex requests that CAISO disclose whether dispatch instructions are mandatory or voluntary and the applicable price for

these dispatches. Powerex also argues that the tariff should provide bid cost recovery for imports and exports during similar system emergencies.

70. WPTF contends that CAISO should permanently codify in its tariff force majeure provisions for large-scale as well as more limited situations. Specifically, WPTF recommends that CAISO consider the criteria used to determine when a market failure has occurred, when an administrative price should be used rather than the last valid interval price, how prices are set across the region, and how intertie and virtual transactions are treated. WPTF also states that CAISO needs clearer communication channels or standing default tariff provisions so that market participants know whether the information CAISO releases during a similar system emergency is valid, and that CAISO should determine how it will remedy inconsistencies between the administrative price it sets and market participants' bid prices.

71. SWP states that, while it appreciates CAISO's efforts during the emergency to maintain system reliability, it looks forward to additional software fixes to ensure that ratepayers are not exposed to unjust and unreasonable rates as a result of software problems.

72. Macquarie asserts that CAISO's failure to notify market participants that the published prices were erroneous, in addition to setting administrative prices that did not reflect system conditions, has resulted in direct financial harm to Macquarie and potentially other market participants who relied on that information for the 4:00-6:00 p.m. settlement period.

73. MSCG states that CAISO provided the market with unclear and inconsistent price signals by issuing a market notice of the $250 per MWh administrative price while the automated dispatch system continued to send hour-ahead scheduling process instructions.

3. <u>CAISO Answer</u>

74. CAISO agrees it should examine steps that can be taken to improve communications regarding market prices during system emergences as part of its upcoming stakeholder process.

75. CAISO notes MSCG's point that its automated dispatch system continued to send dispatch instructions after it announced the $250/MWh price, acknowledging that the unclear price signals may have caused confusion. CAISO contends, however, that it did use its emergency message system to notify all scheduling coordinators with physical supply not to respond to the automatic dispatch system. CAISO states that the upcoming stakeholder process will examine both Macquarie and MSCG's concerns, but clarifies that any confusion resulting from these issues does not change financial market participants' positions.

76. Lastly, CAISO confirms that it will also focus on WPTF's suggestion to create clearer communication channels or establish standing default tariff provisions for handling emergency situations and Powerex's complaint that it was unaware if dispatches were mandatory or voluntary and what the applicable price was during the stakeholder process.

4. Commission Determination

77. We accept CAISO's commitment to convene a stakeholder process to consider tariff revisions to clarify CAISO's actions during system emergencies and address parties' concerns. Any proposals resulting from this stakeholder process that affect rates, terms, and conditions of service must be filed with the Commission.

The Commission orders:

(A) CAISO's settlement prices for the 4:00-6:00 p.m. period are consistent with sections 7.7.15.1 and 35 of its tariff, as discussed in the body of this order.

(B) CAISO's request for waiver of section 7.7.4(3) of its tariff is hereby granted, as discussed in the body of this order.

(C) CAISO's request for waiver of section 11.5.2 of its tariff is hereby granted, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Document Content(s)