141 FERC ¶ 61,069
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

California Independent System Operator Corporation — Docket No. ER12-2539-000

ORDER ACCEPTING TARIFF REVISIONS AND ORDERING A NON-PUBLIC FORMAL INVESTIGATION

(Issued October 26, 2012)

1. On August 28, 2012, the California Independent System Operator Corporation (CAISO) filed proposed revisions to its tariff to expand mitigation of exceptional dispatches in specific circumstances when there is the potential to exercise market power, and corresponding tariff changes to revise the settlement of residual imbalance energy.[1] In this order, we accept CAISO's proposed tariff revisions, subject to conditions, effective August 29, 2012, and grant waiver of the 60-day prior notice requirement.

I. Background

2. The exceptional dispatch mechanism was first accepted by the Commission as part of the Market Redesign and Technology Upgrade (MRTU)[2] to allow CAISO to manually commit and/or dispatch resources that are not cleared through market software. The purpose of dispatching these resources is to maintain reliable grid operations under unusual or infrequent circumstances, including contingencies, such as load uncertainty, loss of excessive amounts of generation, and potential outages of major interties. CAISO may issue exceptional dispatches to start-up and run a unit at its minimum operating level and to instruct a unit to operate at a specific level that is above its minimum operating

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[1] CAISO August 28, 2012 Tariff Amendment Filing (CAISO Filing).

[2] *Cal. Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,274, at PP 267-269 (2006) (MRTU Order), *order on reh'g,* 119 FERC ¶ 61,076 (2007) (MRTU Rehearing Order), *order on reh'g and denying motion to reopen record*, 120 FERC ¶ 61,271 (2007).

level in real-time.[3] Exceptionally dispatched resources are generally paid the higher of the resource's bid price, its default energy bid, or the applicable locational marginal price.[4]

3. The Commission limits mitigation to circumstances in which the potential to exercise market power has been shown.[5] On February 20, 2009, the Commission accepted CAISO's proposal to mitigate exceptional dispatches where the dispatch was made to address reliability requirements related to non-competitive constraints, and address environmental constraints in the Sacramento Delta region known as "Delta Dispatch."[6] On August 19, 2011, in response to CAISO's Filing of tariff revisions designed to address observed bidding behavior, the Commission accepted CAISO's proposal to mitigate exceptional dispatches to ramp resources with ancillary services awards or residual unit commitment obligations to dispatch levels that ensure their availability in real-time.[7] Resources exceptionally dispatched for these reasons are paid the higher of their default energy bid or the locational marginal price at the resource's location.[8]

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[3] CAISO Tariff, § 34.9.

[4] CAISO Tariff, §§ 11.5.6.7.2, 11.5.6.7.3. Default energy bids are calculated by CAISO according to one of the four methods specified in section 39.7 of its tariff, based on the option selected by the applicable scheduling coordinator.

[5] *Market Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities*, Order No. 697, FERC Stats. & Regs. ¶ 31,252, *clarified*, 121 FERC ¶ 61,260 (2007), *order on reh'g,* Order No. 697-A, FERC Stats. & Regs. ¶ 31,268, *order on reh'g and clarification*, 124 FERC ¶ 61,055 (2008).

[6] *Cal. Indep. Sys. Operator Corp.*, 126 FERC ¶ 61,150, at P 74 (2009) (Exceptional Dispatch Order).

[7] *Cal. Indep. Sys. Operator Corp.*, 136 FERC ¶ 61,118, at PP 32-34 (2011) (August 2011 Order). CAISO observed that certain resources were pursuing bidding strategies, which resulted in ancillary services or residual unit commitment awards in the day-ahead market that would be infeasible in the real-time market and would, thus, require exceptional dispatches to ramp the resources up from minimum operating levels so they could meet their obligations.

[8] CAISO Tariff, § 39.7.

4. When a resource is exceptionally dispatched by CAISO, the resource may also receive payment for the residual imbalance energy produced when the resource ramps up to or down from the exceptional dispatch level. Residual imbalance energy is the energy attributable to ramping up to a dispatch at the beginning of an upcoming hour or ramping down from a dispatch after completing a dispatch, including an exceptional dispatch, in the previous hour. Residual imbalance energy does not coincide with any energy that is actually due to an economic dispatch by CAISO in that interval. Residual imbalance energy is settled at a resource's energy bid price for the corresponding reference hour rather than at the locational marginal price, even when the residual imbalance energy is the result of an exceptional dispatch that is mitigated.[9]

II. CAISO Filing

5. CAISO proposes to expand its exceptional dispatch mitigation authority and revise its settlement of residual imbalance energy to prevent non-competitive prices that can be caused by temporal market power. CAISO explains that a market participant can exercise market power by bidding so that dispatch resources are more likely to be exceptionally dispatched.[10]

6. CAISO explains that the operational ramp rate of certain units renders them incapable of effectively increasing output to respond to reliability needs when operating at minimum load or within forbidden operating regions.[11] These units, therefore, must be ramped in some direction (up or down) until they clear the operational range in which they are unable to ramp at their maximum rate. CAISO refers to the range in which a resource is capable of ramping at its highest ramp rate as the "minimum dispatchable level."[12] Whether a resource is at its minimum dispatchable level may determine whether it is capable of responding to a reliability need. CAISO states that there are about 36 resources in its balancing authority area that have these ramping characteristics.[13]

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[9] CAISO Filing at 5.

[10] *Id.* at 1-2, 6.

[11] A forbidden operating region is a pair of lower and higher operating levels between which a resource cannot operate stably. CAISO Tariff, app. A.

[12] CAISO Filing, Ex. ISO-1 at 6.

[13] *Id.*, Ex. ISO-1 at 10 ("When operating at their minimum load, these units can ramp up an average of 64 MW in 30 minutes. However, when operating at their minimum dispatchable levels these resources can ramp up an average of about 164 MW in 30 minutes…").

7. When CAISO identifies a need for ramping capability to meet a reliability issue not modeled by its market software, it may issue an exceptional dispatch to ensure that a resource is operating at its minimum dispatchable level. CAISO explains that its market software will not observe the need to move resources to minimum dispatchable levels to address system conditions that occur beyond those observed within the 60-minute market solution horizon. Thus, manual intervention by way of an exceptional dispatch becomes necessary to position certain resources at operational levels where they would be capable of responding to the events beyond the 60-minute horizon.[14]

8. CAISO states that, under certain system and market conditions, some resources with minimum dispatchable levels above their minimum operating levels are likely to receive an exceptional dispatch to move to their minimum dispatchable levels if they are operating at minimum operating levels during real-time. CAISO states that these market conditions provide resources with significant temporal market power in real-time, enabling them to bid and be paid non-competitive prices, up to $1,000/MWh, to move a resource up to its minimum dispatchable level.[15] CAISO notes that so far in 2012, only ten resources accounted for 95 percent of the exceptional dispatches issued to position resources at their minimum dispatchable level.[16]

9. CAISO states that it has observed the use of a specific bidding methodology to increase the probability that resources will be exceptionally dispatched to their minimum dispatchable levels. CAISO refers to this methodology as the "ex ante strategy." Specifically, CAISO states that in the day-ahead market the resource bids to ensure commitment at minimum load. In the real-time market, the resource submits high bids, up to the bid cap ($1,000/MWh), during peak hours when CAISO may need to have the unit's capacity available to protect against various contingencies that are not modeled in its software. CAISO must exceptionally dispatch the resource up to its minimum dispatchable level and pay the resource its bid price, unless mitigation is available under CAISO's tariff. CAISO states that it observed six instances between June 1, 2012, and August 15, 2012, where resources were able to successfully exercise market power through the "ex ante strategy," resulting in total payments of approximately $2.8 million more than if CAISO had been able to mitigate the exceptional dispatch payments.[17] CAISO argues that without mitigation the potential use of this bidding strategy by other

[14] *Id.*, Ex. ISO-1 at 13-14.

[15] *Id.* at 8.

[16] *Id.*, Ex. ISO-1 at 9.

[17] *Id.*, Ex. ISO-2 at 17.

market participants presents a significant risk to the market of excessive and unjust costs.[18]

10. In addition, CAISO identifies a variation of the bidding methodology described above, which it refers to as the "ex post strategy." CAISO explains that a resource is permitted to change its bid price up to 75 minutes before the trade hour. A resource may receive an exceptional dispatch up to its minimum dispatchable level that lasts for several hours. In this circumstance, a resource can modify its bid after receiving the exceptional dispatch up to the $1,000/MWh bid cap. Absent mitigation, resources exercising market power using the "ex post strategy" could be paid at a level that exceeds what would be expected under competitive conditions. If mitigation did not apply, CAISO notes that the gains would have been roughly $3.1 million.[19]

11. Related to the increased exceptional dispatches of resources to the minimum dispatchable level, CAISO states that it has observed an increase in payments for residual imbalance energy from June 2012 through August 2012. CAISO contends that the increased use of exceptional dispatch, discussed above, increases residual imbalance energy payments because, even where exceptional dispatches are mitigated, the residual imbalance energy is not. Thus, the high-priced energy bids that created the excess gains through the bidding strategies described above are also used to settle residual imbalance energy as the resource ramps down after the last hour of the dispatch. CAISO argues that this problem is exacerbated by the fact that resources that must be positioned at their minimum dispatchable levels through exceptional dispatch generally ramp down more slowly than other resources. Therefore, while these resources are ramping up or down, they produce more residual imbalance energy at the higher bid price.[20]

12. CAISO also asserts that the current residual imbalance pricing structure creates an incentive for resources to inflate residual imbalance energy payments by persistently deviating from dispatches, whether from an exceptional dispatch or a market dispatch. CAISO states that this incentive occurs because CAISO must ensure that dispatches are feasible. For instance, when a resource is instructed to ramp down, but does not ramp down, CAISO will re-dispatch the resource to ramp down from its current operating point rather than from the lower operating point where the resource would have been had it followed the dispatch. The uninstructed deviation results in an increase in the amount of residual imbalance energy produced. CAISO asserts that although the incidence of residual imbalance energy from over-generation has been limited, it is appropriate to

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[18] *Id.* at 9.

[19] *Id.*, Ex. ISO-2 at 18.

[20] *Id.*, Ex. ISO 2 at 19.

address this potential behavior irrespective of the extent to which it has already occurred.[21]

13. CAISO proposes several tariff modifications. CAISO proposes to amend tariff section 39.10 to allow mitigation for exceptional dispatches to bring a generating unit to its minimum dispatchable level. Related to this revision, CAISO proposes to add "minimum dispatchable level" as a new defined term in its tariff.[22] CAISO claims that these tariff modifications eliminate the incentive for resources to submit day-ahead bids aimed at committing the unit at minimum load and, thus, engaging in the bidding behaviors described above.

14. CAISO also proposes to revise the settlement of residual imbalance energy to cap the payment for incremental residual imbalance energy at the greater of the locational marginal price, if the locational marginal price is greater than the lesser of resource's default energy bid or bid price.[23] CAISO explains that the proposed modification provides for payment of residual imbalance energy for ramping associated with an exceptional dispatch at a price similar to the mitigated price paid for an exceptional dispatch. CAISO states that the new rule provides an incentive for resources to bid closer to their marginal costs by guaranteeing bid cost recovery only to the level of the resource's default energy bid, rather than the submitted bid. CAISO states that the proposed settlement structure would have reduced residual imbalance energy payments by a total of $6.3 million for all scheduling coordinators between June 1, 2012, and August 15, 2012.

III. <u>Notice and Responsive Pleadings</u>

15. Notice of the CAISO Filing was published in the *Federal Register*, 77 Fed. Reg. 54,573 (2012), with interventions and protests due on or before September 18, 2012. A notice of intervention and comments were filed by the Public Utilities Commission of the State of California (CPUC). Timely motions to intervene and comments or protests were filed by: (1) GenOn Parties; (2) Dynegy Moss Landing, LLC, Dynegy Morro Bay, LLC, Dynegy Oakland, LLC, and Dynegy Marketing and Trade, LLC;

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[21] *Id.* at 10.

[22] CAISO proposes to define minimum dispatchable level as "[t]he greater of (1) the lower limit of the fastest segment of a Generating Unit's Operational Ramp Rate, as adjusted for the Generating Unit's Forbidden Operating Regions, if any, and (2) if the resource is providing regulation, the lower limit of a Generating Unit's Regulating Range." *Id.* at 10-11.

[23] *Id.* at 11-12 (citing CAISO Tariff, proposed § 11.5.5).

(3) Powerex Corp.; (4) the California Department of Water Resources State Water Project; (5) Calpine Corporation (Calpine); (6) Southern California Edison Company (SoCal Edison); (7) the Northern California Power Agency (NCPA); (8) Pacific Gas and Electric Company (PG&E); (9) the Western Power Trading Forum (WPTF); (10) the NRG Companies (NRG);[24] and (11) the Cities of Anaheim, Azuza, Benning, Colton, Pasadena and Riverside, California (Six Cities); (12) J.P. Morgan Ventures Energy Corporation and BE CA LLC (J.P. Morgan). On October 3, 2012, CAISO submitted an answer. J.P. Morgan filed an answer to CAISO's answer.

IV. Discussion

A. Procedural Matters

16. 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.

17. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2011), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We are not persuaded to accept the answers filed by CAISO and J.P. Morgan answer, and therefore reject them.

B. Proposed Mitigation Measures

18. CPUC, NCPA, PG&E, Six Cities, and SoCal Edison all support CAISO's proposal, highlighting the importance of addressing identified reliability concerns and protecting ratepayers from unjust and unreasonable costs.

19. J.P. Morgan argues that CAISO failed to justify its proposal and make an adequate showing of market power to support the requested mitigation authority, and urges the Commission to reject the proposal or set it for hearing. J.P. Morgan argues that the Commission should reject CAISO's proposal as unduly discriminatory because the new mitigation measures would apply only to a narrow category of resources, mainly older gas-fired units that have minimum operating levels below their minimum dispatchable levels.[25]

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[24] For purposes of this filing, the NRG Companies consist of NRG Power Marketing LLC, Cabrillo Power I LLC, Cabrillo Power II LLC, El Segundo Power, LLC, Long Beach Generation LLC, NRG Solar Blythe LLC, and Avenal Solar Holdings LLC.

[25] J.P. Morgan September 18, 2012 Protest at 2, 25 (J.P. Morgan Protest).

20. J.P. Morgan contends that the mitigation authority requested here by CAISO was expressly rejected in the Exceptional Dispatch Order because CAISO failed to meet its burden of demonstrating the potential to exercise market power. J.P. Morgan notes that, in rejecting CAISO's proposal, the Commission concluded that CAISO's "broad" and "vague" assertions of local temporal market power were insufficient and did not present an objective analysis of market power that examines a lack of adequate alternatives that might cause a resource to be a pivotal supplier with the ability to exact excessive revenues.[26] J.P. Morgan asserts that CAISO cannot rely on the Commission's approval of additional exceptional dispatch mitigation authority in the August 2011 Order because in that case, unlike here, no party challenged CAISO's market power claims.[27]

21. J.P. Morgan states that CAISO has not presented any studies or analyses to support its allegations of market power. J.P. Morgan asserts that CAISO makes no attempt to define any relevant geographic or product markets, or to evaluate any competitive substitutes, as would be necessary under any effective or recognized market power analysis. In particular, J.P. Morgan argues that CAISO has not shown a lack of alternatives beyond the exceptional dispatch of specific resources to satisfy the purported reliability needs.[28]

22. J.P. Morgan also argues that CAISO has not substantiated its general assertions that resources have a reasonable expectation of receiving an exceptional dispatch. J.P. Morgan states that this assertion is at odds with CAISO's repeated statements to the Commission that exceptional dispatches are rare and infrequent, accounting for only 0.3 percent of all dispatches of energy. Further, J.P. Morgan challenges the evidence offered by CAISO to demonstrate that resources can reasonably expect to receive exceptional dispatches, which consists of CAISO's statement that resources that have been exceptionally dispatched since June 1, 2012, have received at least two exceptional dispatches per week on average, with an increase to at least three per week in the first half of August 2012. J.P. Morgan contends that this evidence is insufficient to support CAISO's request because the mere fact that resources were selected for exceptional dispatch in the past does not establish a reasonable probability that those resources will be exceptionally dispatched in the future.[29]

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[26] *Id.* at 8 (citing Exceptional Dispatch Order, 126 FERC ¶ 61,150 at PP 76-78, 103).

[27] *Id.* at 21 (citing August 2011 Order, 136 FERC ¶ 61,118).

[28] *Id.* at 16-18.

[29] *Id.* at 19.

23. J.P. Morgan rejects assertions that either of the bidding behaviors described by CAISO establish the existence of market power. Regarding the "ex ante strategy," J.P. Morgan asserts that CAISO has failed to meet its burden of proving that a resource operating below its minimum dispatchable level in real-time possesses market power. J.P. Morgan also argues that there does not appear to be anything anti-competitive, inappropriate, or unexpected about the bidding strategy described. Further, J.P. Morgan states that studies based on transactions in CAISO's markets show that real-time prices were consistently greater than day-ahead prices, suggesting that the prices alone should not be construed as an indication of market power in the absence of a market power analysis. Therefore, J.P. Morgan asserts that it is reasonable and economically rational to bid prices in the day-ahead market that are comparable to prices it believes are achievable in the real-time. J.P. Morgan contends that this reasonable bidding behavior does not constitute evidence of market power. J.P. Morgan notes that CAISO admits to exceptionally dispatching resources at levels below their minimum dispatchable level and, therefore, cannot argue that it is inappropriate for resources to bid in a way that achieves the same result.[30]

24. J.P. Morgan also argues that CAISO's allegations regarding the "ex post strategy" do not establish the existence of market power. J.P. Morgan refutes as inaccurate CAISO's claim that a market participant has "perfect unilateral market power" after it receives an exceptional dispatch or a notice of exceptional dispatch. J.P. Morgan explains that, after receiving an exceptional dispatch notice from CAISO, a market participant may not be exceptionally dispatched at all or may not be exceptionally dispatched for the full number of hours stated in the notice. Further, J.P. Morgan notes that the CAISO tariff expressly authorizes resources to change their bids up to 75 minutes before the hour. Thus, J.P. Morgan contends that the "ex post strategy" does not violate the tariff.[31]

25. WPTF and Calpine note that they do not object to additional mitigation in situations where the potential to exercise market power has been shown but assert, like J.P. Morgan, that CAISO has failed to make a sufficient market power showing. They argue that CAISO neither demonstrated why the likelihood of a market participant exercising this market power has increased since the Commission rejected this mitigation measure in the Exceptional Dispatch Order nor met its evidentiary burden to demonstrate the frequency and predictability of such market power.[32] Calpine observes that CAISO

[30] *Id.* at 22-24 (citing CAISO Filing at 7).

[31] *Id.* at 24.

[32] WPTF September 18, 2012 Comments at 5 (WPTF Comments); Calpine September 18, 2012 Protest at 6 (Calpine Protest).

has not explained the circumstances that resulted in only 10 resources receiving 95 percent of the exceptional dispatches to minimum dispatchable level and claims and argues, therefore, that this fact does not demonstrate the potential to exercise market power.[33]

26. WPTF and Calpine also criticize CAISO's proposal as overbroad, noting that CAISO has only identified one market participant that has used this bidding strategy. WPTF and Calpine explain that CAISO has already foreclosed the observed market participant's bidding practice through mitigation under its tariff authority for infeasible or "stranded" ancillary services or residual commitment capacity awards.[34]

27. Calpine argues that, while CAISO's proposal purports to be focused on a select group of resources, it could allow CAISO operators unbridled authority to exceptionally dispatch and mitigate any unit to a higher level to allow access to faster ramp rates. Calpine also argues that CAISO's definition of minimum dispatchable level is a misnomer and should instead be defined as the "fastest ramp rate level." Calpine explains that this revised definition demonstrates how a resource at its physical minimum operating level remains dispatchable, but at a ramp rate that is slower and less useful to CAISO.[35]

C. CAISO's Use of Exceptional Dispatch

28. NRG, WPTF, Calpine, and J.P. Morgan argue that additional mitigation measures do not solve the fundamental problem highlighted by CAISO's proposal, which is CAISO's failure to model key operational constraints in its market software. They contend that these modeling deficiencies drive the continued need for exceptional dispatch. Parties argue that CAISO has over-used exceptional dispatch and does not appear to be taking steps to decrease the use of this out-of-market function. Parties add that the use of such out-of-market functions leads to less accurate pricing and damages the overall market.

29. Parties emphasize the need for CAISO to address reliability needs through market mechanisms not out-of-market functions. NRG states that it expects that until market reforms are implemented, the Commission is likely to see additional filings aimed at addressing the symptoms, but not the causes, of this behavior.[36] Similarly, WPTF argues

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[33] Calpine Protest at 6, n.16.

[34] WPTF Comments at 4-5; Calpine Protest at 5-6.

[35] Calpine Protest at 4.

[36] NRG September 18 Comments at 4-5, 12 (NRG Comments).

that procuring out-of-market services to address reliability needs detracts from the important task of designing and implementing market mechanisms that address all important operating constraints, values ramping capabilities, and provides scarcity-responsive price signals resulting from competitive bidding.[37] WPTF notes CAISO's acknowledgement that the introduction of a "locational or temporal ramping service" product, obtained through market mechanisms, could enhance CAISO's ability to meet unexpected operational ramping needs.[38]

30. Calpine asserts that the presence of intermittent and renewable resources in California increases the need for flexible ramping capabilities and a market mechanism, subject to narrowly tailored mitigation measures where market power is shown, that realizes the value of reliability services. Similar to WPTF, Calpine contends that CAISO's proposal distracts from the important task of designing and implementing market mechanisms that value ramping capabilities and provide scarcity-responsive price signals resulting from competitive bidding, rather than out of market dispatches.[39] J.P. Morgan states that, although day-ahead and real-time prices might increase if reliability constraints currently addressed through exceptional dispatch were incorporated into the market optimization software, the prices would reflect competitive conditions and signal to resources where power supply is needed to ensure that all resources are compensated equitably.[40]

31. NRG also argues that CAISO's use of exceptional dispatch to ramp a unit to its minimum dispatchable level indicates that CAISO is relying on capacity beyond the level of the exceptional dispatch. NRG postulates that CAISO is not positioning a unit at its minimum dispatchable level because that is the most efficient operating point for that unit, but because it requires the unit to be able to ramp at its highest ramp rate to produce additional energy in the event of a contingency. NRG contends that such a unit is providing a reliability service that does not correlate to the level at which it is positioned by the exceptional dispatch, but to the level to which it could be ramped. Thus, NRG requests that the Commission confirm that when CAISO offers a capacity procurement mechanism (CPM) designation[41] in response to one of these exceptional dispatches, that

[37] WPTF Comments at 7.

[38] *Id.* at 6 (referencing CAISO Filing, Ex. ISO-1 at 15).

[39] Calpine Protest at 8.

[40] J.P. Morgan Protest at 27.

[41] CAISO offers compensation in the form of capacity payments, pursuant to its CPM authority set forth in section 43 of its tariff, for exceptional dispatches for capacity-related services.

it must be based on CAISO's assessment of the level of output that would have been required to address the anticipated contingency, not the level to which it was exceptionally dispatched.[42]

D. Further Procedures

32. NRG requests that the Commission convene a technical conference to address issues with CAISO market outcomes and prices extending beyond the narrow mitigation remedy sought by CAISO. NRG recommends that the technical conference focus on the full ramifications of un-modeled operating constraints on CAISO market schedules and prices. NRG asserts that the Commission should use the insights gained from this conference to require CAISO to undertake a stakeholder process to address the inefficiencies caused by the un-modeled constraints.[43]

33. J.P. Morgan urges that, if the Commission does not reject CAISO's proposal, the Commission set the proposed revisions for hearing, deny CAISO's request for waiver of the 60-day notice requirement under section 205 of the Federal Power Act (FPA) because CAISO has failed to establish good cause, and suspend the proposed revisions for five months. J.P. Morgan contends that, because the Commission already found an identical proposal to be unjust and unreasonable in the Exceptional Dispatch Order, suspension of the revisions for the maximum five-month period is warranted here.[44]

34. J.P. Morgan also argues that CAISO has been exceeding its tariff authority to issue exceptional dispatches and urges the Commission to include in the hearing a review under FPA section 206 of CAISO's use of exceptional dispatch. J.P. Morgan notes CAISO's admission that it is unwilling to accept market prices of $1,000/MWh or more that the market would produce if CAISO operators did not intervene.[45] J.P. Morgan stresses that CAISO uses exceptional dispatches to manage transmission constraints by attempting to anticipate and preempt congestion, rather than allowing congestion to be resolved through the market mechanisms.[46] In addition, J.P. Morgan states that CAISO's

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[42] NRG Comments at 9-11.

[43] *Id.* at 11-12.

[44] J.P. Morgan Protest at 2, 32 (citing *S. Cal. Edison Co.*, 124 FERC ¶ 61,308, at P 25 (2008) (where the Commission's preliminary analysis indicates that a proposed rate has not been shown to be just and reasonable … the Commission "will generally impose a maximum suspension (*i.e.*, five months)")).

[45] *Id.* at 35-36 (citing CAISO Filing, Ex. ISO- 2 at 28).

[46] *Id.* at 34 (citing CAISO Filing, Ex. ISO-1 at 4).

filing shows that it has continued issuing exceptional dispatches to obtain capacity-related services, thereby contravening the Commission's request that CAISO use market-based mechanisms to obtain capacity-related services.[47]

35. WPTF asserts that the Commission should direct CAISO to develop and implement fully-functional markets with robust and automated market power mitigation schemes. If the Commission accepts CAISO's proposal to mitigate exceptional dispatches to bring resources to their minimum dispatchable levels, WPTF and Calpine contend that the Commission should include sunset provisions and direct CAISO to develop market mechanisms that value flexible ramping capabilities.[48]

36. Six Cities argue that the bidding practices here involve intentional conduct aimed at extracting non-competitive payments from CAISO. Six Cities urge the Commission to initiate an investigation of the practices described by CAISO to determine whether a violation of § 1c.2 of the Commission's regulations,[49] which prohibits manipulation of energy markets, has occurred that would require disgorgement of unlawful profits and consideration of appropriate penalties.[50]

E. <u>Residual Imbalance Energy</u>

37. J.P. Morgan argues that the Commission should either reject CAISO's proposal to change the manner in which residual imbalance energy is settled or set the issue for hearing. J. P. Morgan states that the proposed settlement would effectively mitigate all residual imbalance energy. J.P. Morgan argues that CAISO cannot rely on the same allegations of market power that are unproven for the exceptional dispatch mitigation in support of the proposed settlement. J.P. Morgan contends that CAISO's assertions regarding circumstances where generators persistently deviate from dispatch instruction fail because CAISO has not provided adequate evidence to establish that this alleged risk is sufficiently probable to support a change in the settlement of residual imbalance energy. J.P. Morgan notes that CAISO has been discussing the issue of potential inflated residual imbalance energy payments due to persistent deviations from CAISO dispatch instructions in a pending stakeholder process with no consensus, and to the extent that

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[47] *Id.* at 37.

[48] WPTF Comments at 6-7; Calpine Protest at 8.

[49] 18 C.F.R. § 1c.2 (2012).

[50] Six Cities September 18, 2012 Comments at 5.

CAISO believes that this issue is worth pursuing, CAISO should continue to evaluate it within the stakeholder process.[51]

F. Commission Determination

38. We find that CAISO's proposed tariff revisions are just, reasonable, and not unduly discriminatory, and will accept them subject to the conditions discussed below. Therefore, we find no need for further procedures related to the proposed revisions at this time and reject parties' requests for a technical conference, hearing procedures, and/or initiation of a section 206 proceeding. We also grant CAISO's request for waiver of the 60-day prior notice requirement. As we stated in *Central Hudson Gas & Electric Corp.,*[52] the Commission will not grant a waiver of the 60-day prior notice requirement absent a showing of good cause. Here, CAISO has demonstrated that absent the requested mitigation authority, the use of exceptional dispatch to position certain resources at minimum dispatchable levels could lead to inflated payments for the exceptional dispatch energy and associated residual imbalance energy. Also, in light of the suggestion that certain bidding actions may exacerbate such inflated payments, we find that CAISO has shown good cause to implement the revisions at the earliest possible date. Therefore, we conditionally accept CAISO's proposed revisions to become effective on August 29, 2012.

39. The Commission has previously approved exceptional dispatch mitigation measures where the potential to exercise market power[53] has been shown.[54] The Commission has also stated that, in the absence of "data and evidence explaining how a lack of viable alternatives for procuring the required energy or capacity would reasonably be expected to result in the potential to exercise market power," a presentation by CAISO of "detailed and specific scenarios that establish a plausible potential to exercise market

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[51] J.P. Morgan Protest at 4, 28-30.

[52] 60 FERC ¶ 61,106 at 61,338, *reh'g denied*, 61 FERC ¶ 61,089 (1992); *see also ISO New England Inc.*, 134 FERC ¶ 61,128, at P 44 (2011).

[53] The Commission defines "market power" as a seller's ability to "significantly influence the price in the market by withholding service and excluding competitors for a significant period of time." *Citizens Power & Light Corp.*, 48 FERC ¶ 61,210, at 61,777 (1989); *see also* MRTU Rehearing Order, 119 FERC ¶ 61,076 at P 506, n.511. The Commission has explained that "market power involves the ability to influence market prices." MRTU Order, 116 FERC ¶ 61,274 at P 1052; MRTU Rehearing Order, 119 FERC ¶ 61,076 at P 506.

[54] Exceptional Dispatch Order, 126 FERC ¶ 61,150 at PP 72-73.

power" may be sufficient to justify a request for exceptional dispatch mitigation authority.[55] Consistent with the standards set forth in the Exceptional Dispatch Order and CPM Order, we find that CAISO has shown the potential to exercise market power in the limited circumstance where resources are exceptionally dispatched from minimum load up to minimum dispatchable levels.

40. Specifically, we find that CAISO has shown that under certain market conditions and due to the relative frequency of CAISO's use of exceptional dispatch for this purpose, a resource can predict with a high degree of certainty that CAISO will need to exceptionally dispatch it up from minimum load to its minimum dispatchable level. In fact, CAISO highlights that 95 percent of the time, the same 10 resources have been exceptionally dispatched for this purpose. This pattern suggests a frequent and regular use of exceptional dispatch that could be predictable, and therefore create a plausible potential to exercise market power under the current bidding rules. At times there may be limited resources to respond to real-time needs. CAISO explains that its market software only looks ahead 60 minutes and may not capture the ramping constraints of certain resources beyond the 60-minute time horizon. Therefore, in certain circumstances, resources that have minimum dispatchable levels above minimum load, and have been committed at minimum load, can submit high bids for peak periods in real-time and be relatively certain that CAISO will need to exceptionally dispatch them up to minimum dispatchable level. Thus, these resources have the opportunity to influence the price received for involuntary backstop capacity by bidding at the cap.

41. We reject assertions that the proposed mitigation measures are unduly discriminatory. We find that the operational characteristic at issue here, a substantially slower ramp rate at minimum load, can directly affect CAISO's ability to maintain reliable grid operations. Due to limitations in CAISO's market software, CAISO cannot currently manage these resources effectively without positioning these resources at a higher ramp rate to meet reliability needs of the grid. CAISO's reliance on these types of resources through the use of exceptional dispatch creates a potential opportunity to exercise market power that does not exist for resources without similar operating limitations. Thus, we find that CAISO's proposal is narrowly tailored to address the specific market deficiency presented here.

42. We also find that it is appropriate for CAISO to mitigate residual imbalance energy settlements. Consistent with our finding above that resources may be able to command inflated prices for exceptional dispatches up to minimum dispatchable level, resources could also be paid the inflated prices for the associated residual imbalance energy. Thus, we find that it is just and reasonable for CAISO to pay resources for

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[55] *Cal. Indep. Sys. Operator Corp.*, 134 FERC ¶ 61,211, at P 77 (2011) (CPM Order).

residual imbalance energy at a price similar to the mitigated exceptional dispatch payment. Further, we find that the revised settlement structure should remove any incentive to inflate residual imbalance energy payments by persistently deviating from dispatch instructions. Moreover, we find that the revised settlements will result in just and reasonable compensation because the new method is based on an approximation of a resource's actual incremental costs of producing energy.[56]

43. Although we find, as discussed above, that CAISO's proposed mitigation provisions are appropriate under the circumstances, we share parties' concerns regarding CAISO's use of exceptional dispatch. As originally approved, exceptional dispatches were intended to be "rare and infrequent" and reserved for "genuine emergencies."[57] CAISO's Filing suggests that its use of exceptional dispatch may be too expansive.[58] Although CAISO has noted efforts to address Commission concerns regarding the frequency of exceptional dispatch in the quarterly reports it currently files, it is not evident that exceptional dispatches have become less frequent. We acknowledge that CAISO continues to explore options for adding functionality to its software to remove operational limitations and improve its modeling capabilities. In addition, CAISO has been working with stakeholders through its Renewable Integration Market and Product Review initiative to identify new market products that may be necessary. CAISO also notes that market improvements, such as a 30-minute ramping service may improve the ability for CAISO's market processes to position resources to meet operational ramping needs.[59] Additionally, CAISO is currently pursuing a more comprehensive solution to settle residual imbalance energy.[60] We strongly encourage CAISO to continue

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[56] CAISO Filing at 12.

[57] MRTU Order, 116 FERC ¶ 61,274 at P 267.

[58] *See, e.g.,* CAISO Filing, Ex. ISO-1 at 4 (explaining that CAISO must use exceptional dispatch "where the [CAISO] operator *anticipates congestion could occur* on a specific transmission constraint and there is reason to believe, perhaps based on recent history, that the market software will not be able to manage that congestion effectively.") (emphasis added).

[59] *Id.,* Ex. ISO- 1 at 17.

[60] As part the ongoing bid cost recovery mitigation measures stakeholder initiative, *available at*: http://www.caiso.com/informed/Pages/StakeholderProcesses/BidCostRecoveryMitigationMeasures.aspx, CAISO is considering a metric which would identify resources that are inflating residual imbalance energy payments by persistently over-generating, and would retract these payments, but notes that such a metric is not ready to be implemented at this time. CAISO Filing, Ex. ISO- 3 at 23.

evaluating, through its stakeholder process, new market products, including, but not limited to, a 30-minute ramping service that may reduce CAISO's reliance on exceptional dispatches. We also encourage CAISO to continue to work with stakeholders to develop a long-term solution to the settlement of residual imbalance energy.

44. However, we note that we are concerned with the extent of CAISO's reliance on out-of-market solutions, which tend to artificially depress market prices. It is important for the CAISO market to have market prices that accurately reflect the market value to operate certain resources so that the market will accurately communicate through the locational pricing model where new transmission and generation development are needed.

45. Because CAISO continues to use exceptional dispatch more extensively than originally anticipated, we direct CAISO to submit, within 12 months following the date of this order, a comprehensive report describing in detail the steps it has taken to reduce its reliance on exceptional dispatch since the issuance of this order.[61] CAISO should also include discussion of the specific new market products it has considered, developed, or proposes to develop to reduce reliance on exceptional dispatch and provide an implementation timeline for such products. The report must also separately chart the frequency of exceptional dispatch and mitigation over the most recent 12-month period for which data is available. CAISO should also describe in detail its planned, ongoing, or completed efforts to reduce the frequency of and reliance on exceptional dispatch, such as improvements in forecasting and/or software modeling that CAISO can link directly to a reduction in need for exceptional dispatch. In particular, CAISO should focus on measures that eliminate the preemptive uses of exceptional dispatch to manage routine operating constraints such as congestion and describe, in detail, how these measures will reduce the need for exceptional dispatch.[62]

46. We reject NRG's request for clarification regarding the basis for CPM compensation as beyond the scope of this proceeding, which addresses the narrow issue of whether CAISO's proposed market power mitigation measures are just and reasonable.

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[61] During these 12 months, we suspend the requirement for CAISO to submit the quarterly progress reports. *See, e.g.*, CAISO October 10, 2012 120-Day Exceptional Dispatch Report, Docket Nos. ER08-1178-000 and EL08-88-000.

[62] We note that this report is for informational purposes only and will neither be noticed nor require Commission action.

47. In response to Six Cities' request for an investigation into the bidding behavior identified by CAISO here,[63] and pursuant to FPA sections 201, 307, and 309 (as amended by the Energy Policy Act of 2005)[64] and Part 1b of the Commission's regulations,[65] the Commission confirms its prior authorization[66] of the Office of Enforcement to conduct a non-public, formal investigation, with subpoena authority, regarding violations of the Commission's regulations, including section 1c.2, prohibition of electric energy market manipulation,[67] that may have occurred in connection with, or related to, the bidding practices there described, along with other related practices, including the practices discussed above and any practices referred by a market monitor.[68] If appropriate, the Office of Enforcement may include its investigation of such matters in any existing investigation.

The Commission orders:

(A) Waiver of the 60-day prior notice requirement is hereby granted.

(B) CAISO's proposed tariff revisions are hereby conditionally accepted, to become effective August 29, 2012, as discussed in the body of this order.

(C) CAISO is hereby directed to submit a report on its efforts to reduce the need for exceptional dispatch within 12 months of the date of this order, as discussed in the body of this order.

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[63] We note that, under the Commission's regulations, the CAISO market monitor must refer suspected violations of the Commission's regulations or of the CAISO tariff to the Office of Enforcement. 18 C.F.R. § 35.28(g)(3)(iv) (2012).

[64] 16 U.S.C. §§ 824, 825f, 825h (2006).

[65] 18 C.F.R. Part 1b (2012).

[66] *Cal. Indep. Sys. Operator Corp.*, 135 FERC ¶ 61,110, at P 29 (2011); *see also* August 2011 Order., 136 FERC ¶ 61,118 at PP 42-43.

[67] 18 C.F.R. § 1c.2 (2012).

[68] This investigation includes authority to administer oaths and affirmations, subpoena witnesses, compel their attendance and testimony, take evidence, compel the filing of special reports and responses to interrogatories, gather information, and require the production of any books, papers, correspondence, memoranda, contracts, agreements, or other records.

(D) The issue of whether resources' bidding activities constitute violations of Commission orders, rules and regulations in these proceedings is hereby referred to the Commission's Office of Enforcement for formal investigation under 18 C.F.R. § 1b.5 (2012).

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.