

142 FERC ¶ 61,189
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

California Independent System
Operator Corporation

Docket No. ER13-69-001

ORDER ACCEPTING TARIFF REVISIONS

(Issued March 18, 2013)

1. On October 10, 2012, as supplemented on January 17, 2012, California Independent System Operator Corporation (CAISO) filed proposed tariff revisions to implement an alternative mode of its existing real-time contingency dispatch, referred to as the real-time disturbance dispatch, in order to address contingency events requiring 300 MW or more of generation to resolve. As discussed below, we will accept CAISO's tariff revisions to implement real-time disturbance dispatch effective March 18, 2013, as requested. We direct CAISO to make an informational filing, as also discussed below.

I. Background

2. CAISO states that it currently utilizes a market functionality called real-time contingency dispatch to resolve contingency events that may affect the CAISO market. According to CAISO, real-time contingency dispatch co- optimizes energy and ancillary services in merit order and therefore is more likely to dispatch energy from resources not explicitly awarded operating reserve capacity.¹ This presents a concern, in CAISO's estimation, because for a resource that is awarded operating reserves and is also providing energy for dispatch, the energy not associated with the operating reserves is typically priced at or below the price of the energy associated with the operating reserves. Thus, CAISO states its current use of security constrained economic dispatch to determine dispatch instructions, which assigns the awarded operating reserve capacity of a resource to the uppermost operating range of the resource, is most likely to select the least-cost, energy-only resource.

¹ CAISO October 10, 2012 Filing at 3-4.

3. CAISO believes that reliance on energy-only resources in this regard may jeopardize its ability to comply with the North American Electric Reliability Corporation (NERC) Reliability Standard on Disturbance Control Performance- BAL-002-1 (Reliability Standard BAL-002-1), which requires complete recovery from large-scale contingency events within 15 minutes, due to the comparatively slow response or lack of response by energy-only resources. Moreover, CAISO states it is also concerned about how NERC might view a violation of Reliability Standard BAL-002-1 resulting from CAISO's dispatch of energy-only capacity rather than operating reserves to resolve a large-scale contingency event.²

4. In this filing, CAISO has not proposed to replace the existing real-time contingency dispatch provisions under its tariff, but proposes an alternative dispatch process, referred to as real-time disturbance dispatch, which will allow CAISO system operators additional flexibility to address large-scale contingency events when 300 MW or more of capacity is needed.

II. CAISO's Filing

5. Under proposed new tariff section 34.3.2.2,³ CAISO: (1) establishes a minimum 300 MW threshold before real-time disturbance dispatch may be employed; (2) specifies that real-time disturbance dispatch will not use CAISO's security constrained economic dispatch, but will give dispatch priority to energy bids from awarded operating reserve capacity; and (3) during each ten-minute dispatch interval in which the real-time disturbance dispatch is utilized, the energy bid of the highest-priced resource dispatched will be used to set the market clearing price on a system-wide basis for all resources dispatched under this functionality.⁴ CAISO states the market clearing price will not reflect transmission losses or transmission constraints.⁵ CAISO explains that 300 MW is a minimum threshold that is equal to 80 percent of the most severe single contingency for the San Diego sub-region in California, which includes the San Diego Gas & Electric Company service territory.⁶ CAISO states that it proposes a 300 MW threshold on a sub-

² *Id.*

³ CAISO proposes to renumber existing tariff section 34.3.2, which includes provisions regarding real-time contingency dispatch. *Id.* at 4.

⁴ *Id.* at 4-5.

⁵ *Id.* at 5.

⁶ *Id.* at 4-5.

regional basis so that it can perform the real-time disturbance dispatch more granularly than on a regional basis, if necessary.

6. CAISO states that new section 34.3.2.2 of its tariff specifies that real-time disturbance dispatch will prioritize resources with awarded operating reserves over energy-only resources to resolve contingencies. CAISO states that it will dispatch bids from awarded operating reserves in merit order, based on the available MWs within the resource's ten-minute ramping capability, and then it will dispatch bids from energy-only resources in merit order to resolve a large-scale contingency event once resources with awarded operating reserves have been exhausted. CAISO anticipates that real-time disturbance dispatch will generally not last more than two ten-minute intervals, and once recovery from the contingency is complete, CAISO will revert either to its existing real-time contingency dispatch or the real-time economic dispatch.⁷

7. CAISO states that real-time disturbance dispatch will enhance its ability to continue to satisfy NERC's Reliability Standard BAL-002-1, which requires a balancing authority area to recover its area control error within 15 minutes of the start of a reportable disturbance.⁸ CAISO states that failure to comply with the Reliability Standard BAL-002-1 may result in NERC imposing substantial financial and regulatory penalties on CAISO. CAISO also states that resources with awarded operating reserves satisfy the 15-minute requirement of Reliability Standard BAL-002-1 because operating reserves must be certified to supply CAISO's requested megawatt amount and are therefore obligated to do so within ten minutes of receiving a dispatch instruction.⁹

8. To support its proposal, CAISO states it collected and analyzed data on the responsiveness of resources that responded to the six large-scale contingency events that occurred in 2011 and 2012.¹⁰ CAISO argues that, during four of the days studied, resources with awarded operating reserves responded to dispatch instructions by

⁷ *Id.* at 5 n.13.

⁸ CAISO states that Reliability Standard BAL-002-1 defines a reportable disturbance as a contingency that is greater than or equal to 80 percent of the most severe single contingency. *Id.* at 2.

⁹ CAISO states that awarded operating reserves are subject to performance audits and unannounced testing to ensure that they can respond in a ten minute period. *Id.* at 2-3.

¹⁰ CAISO has provided a declaration from its shift supervisor, John Phipps, which details his findings. *Id.* at 3.

providing 100 percent or more of the energy requested.¹¹ Conversely, CAISO asserts that energy-only resources responded to its dispatch instructions by providing 50 percent of the energy that was requested on the same four days.¹² CAISO contends that this comparatively slow and inadequate response by energy-only resources can jeopardize its ability to complete its recovery within 15-minutes as required by Reliability Standard BAL-002-1. As a result, CAISO claims that it routinely dispatches more resources than needed in an attempt to secure sufficient capacity to meet the contingency recovery requirement.¹³

9. Additionally, CAISO points to a guidance document that was issued by NERC concerning lessons learned from a recent failure to satisfy the 15-minute requirement during a contingency event that occurred in the Northeast.¹⁴ CAISO asserts that the NERC guidance document recommends that a balancing authority area not rely on economic dispatch (co-optimization) during the recovery period and only return to an economic dispatch solution after the contingency event has been resolved.¹⁵

10. On December 10, 2012, Commission staff issued a deficiency letter requesting more information on CAISO's proposal. Specifically, staff requested, among other things, additional information regarding the responsiveness of resources with awarded operating reserves and energy-only resources to CAISO's contingency dispatch instructions, the contingency events that were evaluated, how CAISO determined its

¹¹ *Id.* at 3.

¹² For the other two days studied, CAISO states that it did not observe a significant difference between the level of responsiveness between resources with operating reserves and energy-only resources. *Id.* at 3.

¹³ In its response to staff's deficiency letter, CAISO states it does not track the amounts of energy it dispatches for the specific purpose of anticipating under-performance by resources without operating reserve awards. However, CAISO operations personnel generally use a performance factor of approximately 50 percent to account for the anticipated under-performance of such resources. CAISO January 17, 2013 Deficiency Response at 10.

¹⁴ CAISO October 10, 2012 Filing at 6 n.9 (citing NPCC- Lessons Learned; Area Control Error Event at 2 (May 2, 2011), *available at* http://www.nerc.com/files/NPCC_Area_Control_Error_Event.pdf) (NERC guidance document).

¹⁵ *Id.* at 4.

proposed 300 MW threshold level, and the estimated cost-impact of the six large-scale contingency events if the proposed real-time disturbance dispatch had been used rather than its existing real-time contingency dispatch.¹⁶ CAISO responded to the deficiency letter on January 17, 2013.

III. Notice of Filing and Responsive Pleadings

11. Notice of CAISO's initial filing was published in the *Federal Register*, 77 Fed. Reg. 64,498 (2012), with interventions and comments due on or before October 31, 2012. Timely interventions were filed by Southern California Edison Co., Modesto Irrigation District, Pacific Gas and Electric Co., J.P. Morgan Ventures Energy Corp., the City of Santa Clara, California and the M-S-R Public Power Agency. A timely intervention and supporting comments were filed by California Department of Water Resources State Water Project. Timely interventions and protests were filed by NRG and Dynegy Companies (NRG/Dynegy) and Western Power Trading Forum (WPTF). CAISO filed an answer on November 15, 2012, and NRG/Dynegy filed an answer on November 26, 2012.

12. Notice of CAISO's response to the Commission staff's deficiency letter was published in the *Federal Register*, 78 Fed. Reg. 6090 (2013) with interventions and comments due on or before February 7, 2013. A timely protest was filed by NRG/Dynegy.

IV. Discussion

A. Procedural Matters

13. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2012), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2012), prohibits an answer to a protest or an answer unless otherwise ordered by the decisional authority. We will accept the answers filed by CAISO and NRG/Dynegy because they have provided information that assisted us in our decision-making process.

¹⁶ *Cal. Indep. Sys. Operator Corp.*, Docket No. ER12-69-000 at 2-3 (December 10, 2012) (Commission staff's deficiency letter).

B. Substantive Matters

14. The Commission accepts CAISO's proposed tariff revisions. Under real-time disturbance dispatch, CAISO states that it will dispatch bids from awarded operating reserves in merit order, based on the available MWs within the resource's ten-minute ramping capability, and then it will dispatch bids from energy-only resources in merit order to resolve a large-scale contingency event once resources with awarded operating reserves have been exhausted.¹⁷ As discussed below, we find that CAISO has justified its proposal to prioritize awarded operating reserves over energy-only resources through the use of real-time disturbance dispatch. We therefore find the proposal is just and reasonable and not unduly discriminatory or preferential. We further find that CAISO's proposal will allow it to quickly respond to large-scale contingency events that occur on its system, requiring 300 MW or more of capacity to resolve. We discuss each of these issues in more detail below.

1. Prioritization of Awarded Operating Reserves under Real-Time Disturbance Dispatch

15. WPTF and NRG/Dynegy argue that the real-time disturbance dispatch is not a market-oriented solution. WPTF and NRG/Dynegy assert that real-time disturbance dispatch unduly discriminates in favor of generating facilities that have been awarded operating reserves, and bypasses bids that have not been awarded operating reserves, when both groups of generating facilities have provided bids into the same energy market to provide the same service.¹⁸ WPTF and NRG/Dynegy state that real-time disturbance dispatch will prevent resources from earning the higher imbalance energy price, unless those resources deviate from their day-ahead schedules to "chase" the higher real-time price. Finally, NRG/Dynegy state that, after a contingency event ends, CAISO will reduce the output of the contingency resources to restore its contingency reserves, and increase the output of other resources, ultimately dispatching the bypassed energy-only resources at a lower price.¹⁹

16. WPTF and NRG/Dynegy also argue that CAISO's limited data set of six days in 2011 and 2012 is not statistically significant, and that CAISO has not allowed stakeholders to review the data. Specifically, WPTF notes that only four of the six days

¹⁷ CAISO October 10, 2012 Filing at 5.

¹⁸ NRG/Dynegy October 31, 2012 Protest at 9-10; WPTF October 31, 2012 Protest at 5-6.

¹⁹ NRG/Dynegy October 31, 2012 Protest at 11.

referenced by CAISO support its position, while on the other two days, CAISO witnessed no difference in the behavior of energy-only resources and resources with awarded operating reserves. NRG/Dynegy note that even on the four days cited, CAISO offers limited support by stating that “in most cases” resources not awarded operating reserves responded less than 50 percent of the time. NRG/Dynegy argue that it has not been able to verify CAISO’s claims regarding resource performance because CAISO has not made the underlying data available to market participants despite a request from NRG during CAISO’s stakeholder process.²⁰ WPTF and NRG/Dynegy state that other data points should be investigated to determine whether CAISO met Reliability Standard BAL-002-1 during the contingency events; why some resources responded and others did not; and whether price, hydro conditions, or other exogenous factors played a role.²¹

17. In response, CAISO states that if it continues to use its existing mode of contingency dispatch, which performs a security constrained economic dispatch, then it would have to use exceptional dispatch to address a major contingency.²² CAISO asserts that real-time disturbance dispatch is more market-oriented than exceptional dispatch, because real-time disturbance dispatch would use a merit-order dispatch, creating a separate bid stack for each type of resource employed and then dispatching each bid stack in merit order, to generate a market clearing price to settle the market.²³

18. CAISO further responds that real-time disturbance dispatch is not unduly discriminatory because the difference in performance between awarded operating reserve capacity and energy-only capacity justifies prioritizing awarded operating reserves.²⁴ CAISO reiterates that operating reserve capacity is certified to supply the requested megawatt amount within ten minutes of receiving a dispatch instruction, while energy-only capacity is not subject to this requirement. CAISO also notes that its proposed

²⁰ *Id.* at 6.

²¹ *Id.*; WPTF October 31, 2012 Protest at 4.

²² *See Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,069, at P 2 (2012) (“The exceptional dispatch mechanism ... allow[s] 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 inerties.”).

²³ CAISO November 15, 2012 Answer at 4, 18-19.

²⁴ *Id.* at 21.

payment scheme is not discriminatory, as both types of capacity will receive the energy bid of the highest-priced dispatched resource.

19. Regarding the data it offered in support of its proposal, CAISO clarifies that the data provided on the six days in question is the comprehensive set of data from all of the days relevant to CAISO's proposal.²⁵ CAISO argues that the Commission does not need additional data or a technical conference, as suggested by NRG/Dynegy, to make its determination. Further, CAISO asserts that its data is confidential because it reflects resource-specific information.²⁶

20. NRG/Dynegy disagree that awarded operating reserves are more reliable than energy-only resources, arguing that energy-only resources are often certified for ten-minute response, but they are not selected to provide operating reserves at a given point in time.²⁷ Although CAISO explained in response to the Commission staff's deficiency letter that resources without operating reserves awards include resources with certified operating reserve capacity as well as resources without certified operating reserve capacity, and provided a general chart showing that resources without certified operating reserve capacity are less responsive than resources with certified operating reserve capacity,²⁸ NRG/Dynegy conclude that CAISO's data are inconclusive. Specifically, they argue that CAISO's data do not show a difference between the resources awarded operating reserves and the certified resources that are not awarded operating reserves.²⁹

21. In response to Commission staff's deficiency letter, CAISO explains that the operating days it examined met two criteria: (1) the size of the contingency considered had to meet the proposed 300 MW minimum threshold for deploying real-time disturbance dispatch; and (2) CAISO operations found it challenging to recover from the contingency event. Thus, CAISO maintains that there were six events that qualified,

²⁵ *Id.* at 15.

²⁶ *Id.* at 17. CAISO also notes that answering the other questions proposed by protesters would raise the same confidentiality issue.

²⁷ NRG/Dynegy November 26, 2012 Answer at 7.

²⁸ CAISO January 17, 2013 Deficiency Response at 18.

²⁹ NRG/Dynegy February 7, 2013 Protest at 3-6.

ranging in size from the 260 MW unplanned outage of the Encina generating unit 5,³⁰ to an 1107 MW unplanned outage of the Diablo Canyon generating unit 2. In addition, CAISO has provided the masked data for the contingency events, which describe the specific outages and the levels of responsiveness between awarded operating reserves and energy-only resources by market participants.³¹

22. CAISO also provided an explanation of the responsiveness of resources with awarded operating reserves. In sum, during the six major contingency events, response by awarded operating reserves ranged from 73 percent to 106 percent, while response by energy-only resources was below 50 percent on five of the six days.³²

23. In response to the question of why some resources were non-responsive, CAISO explains that it has recently made software changes to more quickly communicate contingency dispatch instructions, and that it also began issuing separate start-up instructions and dispatch instructions to resources with non-spinning reserve.³³ NRG/Dynegy agree that CAISO's software changes should increase the responsiveness of resources, and argue that these changes make CAISO's real-time disturbance dispatch unnecessary.³⁴

24. Finally, NRG/Dynegy assert that real-time disturbance dispatch will increase imbalance energy prices for ratepayers because it will prioritize operating reserve capacity associated with the upper part of a resource's bid curve. In response to Commission staff's deficiency letter, CAISO estimated that the cost of solving the six

³⁰ CAISO January 17, 2013 Deficiency Response at 5-6 (CAISO explains that this outage was combined with a low area control error of -250 MW that made the contingency appear larger than 260 MW).

³¹ *Id.* at 8-10, 18, 20.

³² CAISO provides additional detail on one day, when the resources awarded operating reserves responded with 76 percent of the requested amount, while five of the seven energy-only resources either provided none of the requested dispatch amount or moved in the opposite direction of the dispatch instruction. *Id.* at 2-4.

³³ *Id.* at 4-5.

³⁴ NRG/Dynegy February 7, 2013 Protest at 7.

major contingency events using real-time disturbance dispatch, rather than the existing real-time contingency dispatch, was approximately \$50,000.³⁵

Commission Determination

25. We find CAISO's proposal to prioritize resources with awarded operating reserves over energy-only resources during significant contingency events to be just and reasonable and not unduly discriminatory or preferential, as CAISO has satisfactorily demonstrated that such treatment is warranted. Specifically, CAISO has shown, through its data submission, that awarded operating reserves outperformed energy-only resources when dispatched in response to major contingencies requiring 300 MW or more to resolve. Although CAISO identified only six major contingency events in 2011 and 2012 from which it had difficulty recovering, we nonetheless find it is critical that CAISO recover quickly when these major contingency events do occur, since these events can threaten the reliability of the grid as well as CAISO's compliance with NERC and Western Electricity Coordinating Council (WECC) reliability standards.³⁶ Thus, CAISO's preference to dispatch resources with awarded operating reserve capacity is not unduly discriminatory. Moreover, we note that, in most instances, resources will only be dispatched for two ten-minute intervals under its real-time disturbance dispatch proposal, in order to resolve the large-scale contingency event, before CAISO reverts to its existing real-time contingency dispatch, or its normal five-minute real-time economic dispatch. Regarding CAISO's assertion that, absent approval of the instant proposal, it would have to resort to exceptional dispatch when dispatch options are exhausted under the current process, we find real-time disturbance dispatch to be a more market-oriented solution.³⁷ The reason the real-time disturbance dispatch proposal is a more market-oriented solution is because CAISO will dispatch bids from awarded operating reserves in merit order,

³⁵ CAISO January 17, 2013 Deficiency Response at 19-20.

³⁶ NRG/Dynegy point to CAISO's software improvements as a reason why the proposal is unnecessary. However, as discussed herein, we find that on balance, real-time disturbance dispatch is a reasonable tool to help ensure the reliability of the system and that the data provided by CAISO supports the prioritization of resources with awarded operating reserves. Nonetheless, we encourage CAISO to continue its software enhancements and, if those enhancements demonstrate improved responsiveness of energy-only resources, to consider further tariff revisions through a stakeholder process.

³⁷ See *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,069, at P 43 (2012) (strongly encouraging CAISO to continue developing new market products that may reduce its reliance on exceptional dispatches).

based on the available MWs within the resource's ten-minute ramping capability, and then it will dispatch bids from energy-only resources in merit order to resolve a large-scale contingency event once resources with awarded operating reserves have been exhausted.³⁸ Therefore, we find WPTF and NRG/Dynegy's arguments regarding real-time disturbance dispatch not being a market-based solution unpersuasive.

26. We disagree with the arguments raised by WPTF and NRG/Dynegy concerning the data set of six days that CAISO evaluated to support its proposal to implement real-time disturbance dispatch. CAISO stated that it examined these six days in 2011 and 2012 because they were a comprehensive set of days where CAISO experienced major contingencies of 300 MW or more on its system from which the system had difficulty recovering. We find that CAISO has provided enough information for the Commission to evaluate the reasonableness of CAISO's real-time disturbance dispatch proposal in this proceeding. In addition, we find that CAISO has provided a reasonable amount of data, in view of the fact that real-time disturbance dispatch would only be applied during significant contingency events. Thus, we will not convene a technical conference on this issue or require any further information from CAISO. We will, however, direct CAISO to make a report to the Commission and to stakeholders within 14 months after the proposal is implemented.³⁹ The report should include data regarding how often it has used real-time disturbance dispatch and real-time contingency dispatch and what the response from participating generation has been under both tariff provisions.⁴⁰ The report should also include information about the cost impact associated with using real-time disturbance dispatch as opposed to the real-time contingency dispatch, the status of its planned software enhancements, and a review of whether the two parallel processes remain necessary given the additional data.

27. Contrary to the assertions made by WPTF and NRG/Dynegy, CAISO has provided sufficient information regarding the levels of responsiveness to CAISO dispatch instructions between resources with awarded operating reserves and energy-only resources for the six days where it experienced contingency events of 300 MW or

³⁸ CAISO October 10, 2012 Filing at 5.

³⁹ *Id.* at 6. We note that during its stakeholder process, CAISO agreed to present a future report on how often it uses "real-time contingency dispatch" and the response of resources. This reporting requirement expands on that commitment.

⁴⁰ This filing will be for informational purposes only. Therefore, the filing will not be publicly noticed in the *Federal Register* and the Commission will not act on it.

greater.⁴¹ CAISO has further provided two separate line diagram charts which depict that resources awarded operating reserves responded to dispatch instructions with greater consistency than energy-only resources.⁴² CAISO has explained that certified operating reserve capacity resources are subject to performance audits and unannounced testing to ensure that they can respond within a ten-minute period to meet the obligation to provide operating reserves whereas energy-only resources do not have the same obligation to respond to a contingency event as resources with awarded operating reserves.⁴³ Moreover, CAISO has stated that it routinely dispatches more resources than would otherwise be needed to ensure that it will recover from a contingency event as required by Reliability Standard BAL-002-1 because it has to take into account the anticipated under-performance of energy-only resources.⁴⁴ Therefore, based on this evidence and the comparatively slow or lack of performance of energy-only resources to dispatch instructions, we find that CAISO has adequately justified its proposal to prioritize awarded operating reserves over energy-only resources under the proposed real-time disturbance dispatch option.

28. In regard to NRG/Dynegy's arguments that resources with awarded operating reserves are not more reliable than energy-only resources that are also certified to provide a ten-minute response, but are not chosen to provide the service, we find this to be inaccurate. Importantly, NRG/Dynegy concede that, on the four days presented in CAISO's proposal, resources with awarded operating reserves were significantly more responsive than certified resources without operating reserve awards.⁴⁵ However,

⁴¹ See CAISO January 17, 2013 Deficiency Response at 2, 6 (tables showing the responsiveness of resources on each of the six days studied, and the outage levels on the six days studied).

⁴² *Id.* at 8-9 (charts showing the difference in responsiveness between operating reserve resources and energy-only resources, across numerous contingency dispatches (both minor and major) in 2012).

⁴³ CAISO October 10, 2012 Filing at 2-3; CAISO November 15, 2012 Answer at 22.

⁴⁴ CAISO October 10, 2012 Filing at 3; CAISO January 17, 2013 Deficiency Response at 10-11.

⁴⁵ NRG/Dynegy February 7, 2013 Protest at 3 ("Other than the four days presented in the CAISO's original proposal, the Protestors fail to see any significantly enhanced response from resources with operating reserves ... as compared to certified resources without operating reserves...").

NRG/Dynegy assert that the remainder of CAISO's data points does not show a significant difference in responsiveness. We find that CAISO has provided specific evidence which shows that on four of the six days where it experienced contingency events, energy-only resources did not perform at the same level as resources with awarded operating reserves. These days are the events relevant to real-time disturbance dispatch, and we are not persuaded by NRG/Dynegy to consider the entire universe of contingency dispatches, as contingencies under 300 MW will continue to be resolved using CAISO's existing real-time contingency dispatch.

29. Additionally, we find WPTF and NRG/Dynegy's concerns about real-time disturbance dispatch preventing resources from earning the higher imbalance price, unless those resources deviate from their day-ahead schedules to "chase" the higher real-time price to be speculative. CAISO has explained that real-time disturbance dispatch will be used infrequently, under specific circumstances, and will only have a limited cost impact. Further, energy-only resources may still be dispatched as needed, and awarded the same price as all resources that respond to resolve the contingency.

2. System Reliability and Reliability Standard BAL-002-1

30. WPTF and NRG/Dynegy argue that there is no indication or evidence that CAISO has been, or will be, unable to comply with the requirements of Reliability Standard BAL-002-1 using its current real-time contingency dispatch.⁴⁶ NRG/Dynegy further assert that this Reliability Standard does not require a balancing authority area to rely solely on energy from operating reserves to meet its requirements.⁴⁷ NRG/Dynegy also argue that CAISO's reliance on NERC's guidance document to justify its proposal is misguided because CAISO's proposal does not respond to the corrective actions set forth by NERC.⁴⁸ According to NRG/Dynegy, the NERC guidance document specifically suggests that system operators maintain a mix of reserve and non-reserve energy. NRG/Dynegy assert that this is CAISO's existing practice which real-time disturbance dispatch would replace.

31. In its answer, CAISO states that WPTF and NRG/Dynegy misconstrue the purpose of its proposed tariff amendment, in that its purpose "is not to address a past or

⁴⁶ WPTF October 31, 2012 Protest at 3; NRG/Dynegy October 31, 2012 Protest at 4.

⁴⁷ NRG/Dynegy October 31, 2012 Protest at 7.

⁴⁸ *Id.* at 8-9; NRG/Dynegy November 26, 2012 Answer at 4-5; NRG/Dynegy February 7, 2013 Protest at 7-8.

anticipated failure to satisfy [Reliability Standard BAL-002-1], but rather [is] to minimize the potential risk to the bulk power system that could result from failure to recover from an area control error event.”⁴⁹ CAISO reiterates that real-time disturbance dispatch is consistent with and supported by the NERC guidance document because CAISO will continue to dispatch operating reserve and energy-only resources, albeit in a different order.⁵⁰

32. According to NRG/Dynegy, the NERC guidance document sets forth four remedial actions: to increase the operating reserve bias, to increase the spinning reserve requirement, to maintain a mix of operating reserves and energy-only resources of at least 140 percent of the first contingency loss, and to only return to economic dispatch after the contingency has been resolved.⁵¹ NRG/Dynegy agree with CAISO that real-time disturbance dispatch should not perform an economic dispatch during a contingency event, and acknowledge that CAISO’s existing real-time contingency dispatch may be counterproductive in directing some resources to decrease their output during a contingency event. However, NRG/Dynegy maintain that CAISO’s proposal is otherwise inconsistent with the NERC guidance document.

Commission Determination

33. We find that CAISO has explained that real-time disturbance dispatch is a reasonable tool to allow CAISO operations to minimize the risk that major contingencies pose to CAISO’s system. We reject WPTF and NRG/Dynegy’s arguments that an actual violation of the Reliability Standard BAL-002-1 is necessary to justify CAISO’s proposal. We find that contingency events often occur unexpectedly and it is appropriate for the balancing authority area to guard against potential reliability problems even where such a contingency has never occurred in the past.⁵² CAISO has demonstrated that the proposed real-time disturbance dispatch tariff amendment is a proactive measure intended, in part, to minimize the risk that major contingencies pose to CAISO’s system reliability.

⁴⁹ CAISO November 15, 2012 Answer at 11.

⁵⁰ CAISO states that although real-time disturbance will prioritize the dispatch of awarded operating reserves, both awarded operating reserves and energy-only resources will be subject to merit order dispatch. *Id.* at 6.

⁵¹ NRG/Dynegy November 26, 2013 Answer at 4-5; NRG/Dynegy February 7, 2013 Protest at 7-8.

⁵² See *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,135, at P 38 (2012).

34. As noted, under real-time disturbance dispatch, CAISO will maintain a mix of awarded operating reserve capacity and energy-only capacity, and this is consistent with one of NERC's recommendations.⁵³ In addition, as NRG/Dynegy acknowledge, real-time disturbance dispatch satisfies another NERC recommendation by providing that CAISO will revert to its security constrained economic dispatch only after a significant contingency has been resolved.⁵⁴ However, our determination is not predicated on whether CAISO has complied with the NERC guidance document; and therefore, this document was not necessary for CAISO to show that its proposal is just and reasonable under section 205 of the Federal Power Act.⁵⁵ As discussed above, we find that CAISO has shown that real-time disturbance dispatch is a reasonable tool for CAISO operations because, in CAISO's experience as shown by the data it provided, awarded operating reserves have proven more responsive to contingency dispatch instructions.

3. Threshold Level

35. WPTF and NRG/Dynegy argue that CAISO's 300 MW threshold is unreasonable and insufficiently explained. WPTF and NRG/Dynegy state that CAISO incorrectly represents its 300 MW threshold value as representing 80 percent of the most severe single contingency for the San Diego sub-region, when in fact, that number should be approximately 480 MW, which reflects that the Otay Mesa generating unit in the San Diego sub-region is in service.⁵⁶ WPTF and NRG/Dynegy also question why the threshold value should be determined on a sub-regional basis, when CAISO's tariff language does not distinguish sub-regional deployment of awarded operating reserves from balancing authority area-wide deployment.

36. CAISO responds by arguing that the 300 MW level is just and reasonable because it is more stringent than its existing real-time contingency dispatch, which has no threshold.⁵⁷ CAISO states that it proposed a 300 MW threshold for flexibility, but that it

⁵³ NERC guidance document at 1, *supra* n.14 (corrective action recommending "System Operators to maintain a mix of Shared Activation of Reserves...").

⁵⁴ As discussed above, while the real-time disturbance dispatch proposal has some market-oriented features, such as the merit order dispatch among the categories of resources, it does not rely on security constrained economic dispatch.

⁵⁵ 16 U.S.C. § 824d (2006).

⁵⁶ WPTF October 31, 2012 Protest at 6-7; NRG/Dynegy October 31, 2012 Protest at 12.

⁵⁷ CAISO November 15, 2012 Answer at 22-24.

does not object to tariff language reflecting the 80 percent standard (i.e., approximately 480 MW). CAISO also states that the minimum threshold should be determined on a sub-regional basis so that it can be applied sub-regionally or system-wide.

37. In response to Commission staff's deficiency letter, CAISO explains that the single largest contingency is not a fixed value, but changes based on the availability of resources and contingencies.⁵⁸ CAISO cites a range of potential minimum threshold values based on service territories and ancillary service regions and sub-regions, from 480 MW to 900 MW.⁵⁹ CAISO clarifies that the purpose of its single 300 MW proposed threshold is to define a clear trigger for CAISO operations to consider whether to use real-time disturbance dispatch or the existing contingency dispatch authority. CAISO provides examples of contingencies that would require resources from multiple service areas to respond, such as a contingency in the South of Lugo area which would require resources in both the San Diego Gas & Electric and the Southern California Edison service territories. CAISO explains that it favors a 300 MW minimum threshold over 480 MW because it provides greater flexibility, and because on a high-load day, the loss of a 300 MW resource in the San Diego Gas & Electric service territory can lead to an overload of a transmission path in violation of NERC reliability requirements.⁶⁰ Finally, regarding sub-regional deployment, CAISO explains that this flexibility also exists under its current contingency dispatch, and it helps ensure that it can deploy resources that are in the same region and, thus, are deliverable.⁶¹

Commission Determination

38. We agree with CAISO that its inclusion of a 300 MW threshold provides an important distinction between real-time disturbance dispatch and CAISO's existing real-time contingency dispatch. CAISO has justified the use of a single, defined threshold by explaining that this will provide a clear trigger so that operators have flexibility to react quickly to a significant contingency event and restore balance within 15 minutes. Further, 300 MW is a reasonable level because, as CAISO has explained, a 300 MW outage on CAISO's system on a high-load day could lead to an overload of a transmission path. Regarding sub-regional deployment, CAISO has explained that this capability will ensure that it dispatches resources that are in the same region and thus, are

⁵⁸ CAISO January 17, 2013 Deficiency Response at 11.

⁵⁹ *Id.* at 12.

⁶⁰ *Id.* at 14.

⁶¹ *Id.* at 19.

deliverable (i.e., capable of responding to the contingency).⁶² Thus, we find that the proposed 300 MW threshold for real-time disturbance dispatch is just and reasonable because it provides a limit on CAISO's deployment of real-time disturbance dispatch, while also providing a simple, objective threshold for CAISO operations, as well as reasonable flexibility for its operators in the event a significant resource is out of service on a high-load day.

The Commission orders:

CAISO's proposed tariff sheets are hereby accepted, effective March 18, 2013, as requested.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

⁶² *Id.*