UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	**)** **)**	**Docket No. ER13-69-000**

ANSWER TO MOTIONS TO INTERVENE AND COMMENTS, MOTION TO FILE ANSWER, AND ANSWER TO PROTESTS, OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

The California Independent System Operator Corporation ("ISO")[1] files this answer to the motions to intervene and comments submitted in this proceeding in response to the ISO's filing on October 10, 2012 of a tariff amendment to implement an alternative mode of the existing real-time contingency dispatch of resources in the ISO markets, referred to as the real-time disturbance dispatch ("October 10 tariff amendment").[2] The ISO also submits a motion to file an answer and its answer to the protests submitted in the proceeding by NRG/Dynegy and WPTF.[3] For the reasons discussed below, the Commission

---

[1] Capitalized terms not otherwise defined herein have the meanings set forth in Appendix A to the ISO tariff, as revised by the proposed tariff changes contained in the tariff amendment submitted in this proceeding. Except where otherwise specified, references to section numbers are references to sections of the ISO tariff as revised by the proposals in the tariff amendment. The ISO is sometimes referred to as the CAISO.

[2] The following entities filed motions to intervene in the proceeding: the California Department of Water Resources State Water Project ("SWP"); City of Santa Clara, California, and M-S-R Public Power Agency; J.P. Morgan Ventures Energy Corporation and BE CA LLC; Modesto Irrigation District; NRG Power Marketing LLC, Cabrillo Power I LLC, Cabrillo Power II LLC, El Segundo Power LLC, High Plains Ranch II, LLC, Long Beach Generation LLC, NRG Solar Alpine LLC, NRG Solar Borrego I LLC, NRG Solar Blythe LLC, NRG Solar Roadrunner LLC, Avenal Solar Holdings LLC, Dynegy Marketing and Trade, LLC, Dynegy Moss Landing, LLC, Dynegy Morro Bay, LLC, and Dynegy Oakland, LLC (collectively, "NRG/Dynegy"); Pacific Gas and Electric Company; Southern California Edison Company ("SCE"); and Western Power Trading Forum ("WPTF"). The ISO has no objection to the motions to intervene or to the sole set of submitted comments, filed by SWP in support of the October 10 tariff amendment.

[3] The ISO submits this answer pursuant to Rules 212 and 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. §§ 385.212, 385.213. The ISO requests waiver of Rule

should accept the ISO's filing as just and reasonable, subject only to the ISO's agreement, as discussed below, to modify the MW threshold for implementing the real-time disturbance dispatch if directed by the Commission.

I. Summary

The ISO submitted the October 10 tariff amendment to ensure that the ISO can preserve system reliability and follow guidance provided by the North American Electric Reliability Corporation ("NERC") on how to ensure full compliance with mandatory reliability standards. In their protests, a handful of market participants argue that their judgment should be substituted for the ISO's conclusions of what is needed to comply with NERC standards and the NERC guidance document. The focus of these protests is the order of priority of dispatch of energy-only resources during the relatively infrequent major disturbance events that are the subject of the ISO's proposed tariff revisions. These protests also suggest that the ISO must actually be forced into a situation with risks to the reliability of the bulk power system, and a reliability standard violation, before it can justify the tariff authority it believes is appropriate to ensure reliability and compliance with NERC standards. While the ISO is strongly supportive of efficient wholesale electricity markets and reliance on markets to address system needs, the reliability of the ISO controlled grid must

---

213(a)(2), 18 C.F.R. § 385.213(a)(2), to permit it to make an answer to the above-listed protests. Good cause for this waiver exists here because the answer will aid the Commission in understanding the issues in the proceeding, provide additional information to assist the Commission in the decision-making process, and help to ensure a complete and accurate record in the case. *See, e.g.*, *Equitrans, L.P.*, 134 FERC ¶ 61,250, at P 6 (2011); *California Independent System Operator Corp.*, 132 FERC ¶ 61,023, at P 16 (2010); *Xcel Energy Services, Inc.*, 124 FERC ¶ 61,011, at P 20 (2008).

be the ISO's paramount concern, particularly where NERC has issued guidance that economic considerations should be secondary when certain contingencies occur and until they are resolved.

Specifically, NRG/Dynegy and WPTF dispute the ISO's explanation of why it is necessary to implement the new real-time disturbance dispatch in order to minimize the risk to the bulk power system of an inability to recover from an area control error event within 15 minutes, as required by the NERC Reliability Standard on Disturbance Control Performance (BAL-002-1), consistent with NERC's guidance document regarding a recent failure to satisfy that Reliability Standard during a contingency event in the Northeast Power Coordinating Council region.[4] They take issue with the ISO's analysis indicating this risk is a concern because energy bids from resources in the ISO markets without certified and awarded operating reserves ("energy-only capacity") do not, as a whole, respond to real-time contingency dispatches as quickly or reliably as resources in the markets with certified and awarded operating reserves ("operating reserve capacity").[5]

As explained below, the ISO's proposed use of the real-time disturbance dispatch is a just and reasonable measure to comply with BAL-002-1 and the

---

[4] *NPCC – Lessons Learned; Area Control Error Event* (May 4, 2011) ("NERC guidance document"). As noted in the October 10 tariff amendment, this guidance document is available on NERC's website at http://www.nerc.com/files/NPCC_Area_Control_Error_Event.pdf.

[5] BAL-002-1 requires a balancing authority to recover its area control error within 15 minutes of the start of a Reportable Disturbance, which is defined in the Reliability Standard as a contingency that is greater than or equal to 80 percent of the most severe single contingency. Operating reserve capacity dispatched by the ISO (*i.e.*, awarded operating reserve) satisfies the 15-minute requirement because it must reach the ISO's requested megawatt (MW) amount within 10 minutes of receiving a dispatch instruction. Transmittal letter for October 10 tariff amendment at 2-3. In contrast, energy-only capacity is not subject to such a 10-minute dispatch obligation.

NERC guidance document, both of which contemplate the primary use of operating reserve capacity to resolve major contingencies while also allowing the use of energy-only capacity for that purpose. Further, the ISO's analysis fully supports implementation of the tariff amendments to implement the new real-time disturbance dispatch operating mode, even given the ISO expectation that it will be deployed only rarely and for short intervals to address major contingencies.

NRG/Dynegy and WPTF argue that the real-time disturbance dispatch is not a market-oriented solution. The protesters fail to recognize that the real-time disturbance dispatch approach is more market-oriented than reliance on exceptional dispatch to resolve contingencies. As such, the approach set forth in the October 10 tariff amendment promotes the Commission's stated goal of using a market-oriented solution rather than exceptional dispatch to resolve contingencies. A merit-order dispatch, such as the ISO proposes, generates a price that will be used to settle the market, whereas exceptionally dispatched resources do not set the market price. Moreover, the NERC guidance document clearly recommends the suspension of economic dispatch until the contingency is resolved because economic dispatch has "the effect of dispatching down, or halting some of the on-line units ramping up," thus delaying recovery from an area control error event.

Further, NRG/Dynegy and WPTF fail to show that the real-time disturbance dispatch unduly discriminates between similarly situated market participants or that the ISO's proposed use of a minimum threshold for implementing the real-time disturbance dispatch is unreasonable. As explained

below, the ISO is prepared to increase the minimum threshold for implementing the real-time disturbance dispatch in response to the concerns raised by NRG/Dynegy and WPTF.

The ISO urges the Commission to recognize that the ISO's proposed use of the real-time disturbance dispatch is a just and reasonable measure to mitigate risk to the bulk power system from an area control error event, consistent with BAL-002-1 and the NERC guidance document. Indeed, the ISO respectfully submits that the Commission should only reject the ISO's proposed tariff revisions if it first provides assurances that the ISO need not take the steps it has proposed to comply with the reliability standard and the NERC guidance document.

II. Answer

A. The Real-Time Disturbance Dispatch Is a Just and Reasonable Measure to Comply With Reliability Standard BAL-002-1 and the NERC Guidance Document.

NRG/Dynegy and WPTF claim that the proposed real-time disturbance dispatch is not supported by the directives in BAL-002-1 and the NERC guidance document.[6] These claims appear to be based on a fundamental misunderstanding of how the real-time disturbance dispatch will operate. NRG/Dynegy and WPTF erroneously assert several times that the real-time disturbance dispatch departs from NERC's directives because it will dispatch

[6] NRG/Dynegy at 7-9; WPTF at 4-5.

only operating reserve capacity.[7] The ISO proposes no such thing. To the contrary, proposed tariff section 34.3.2.2 states that the real-time disturbance dispatch "will dispatch the Operating Reserve capacity in merit order *and will then* dispatch the non-Operating Reserve capacity [*i.e.*, energy-only capacity] in merit order based on available MW within the capacity's 10-minute ramping capability" (emphasis added).[8] Thus, although the real-time disturbance dispatch will prioritize the dispatch of operating reserve capacity, both operating reserve capacity and energy-only capacity will be subject to merit-order dispatch under the proposed tariff revisions.

The proposed dispatch priority of the real-time disturbance dispatch is consistent with and supported by BAL-002-1 and the NERC guidance document. In fact, BAL-002-1 requires each balancing authority to "have access to and/or operate Contingency Reserve to respond to Disturbances. Contingency Reserve may be supplied from generation, controllable load resources, or coordinated adjustments to Interchange Schedules."[9] Therefore, BAL-002-1 specifically

---

[7] NRG/Dynegy at 7 ("However, nothing in BAL-002-1 directs that a Balancing Authority must rely solely on energy from operating reserves to meet its requirements."); *id.* at 8 ("That conclusion [in the NERC guidance document] runs counter to what the CAISO is now seeking to do – to dispatch *only those resources that are providing operating reserves* during a [major contingency] event.") (emphasis in original); *id.* at 9 ("This corrective action of dispatching energy from both resources awarded, and not awarded, operating reserves is the existing CAISO practice which the CAISO now proposes to replace."); WPTF at 5 ("Similarly, in its corrective actions, the NERC Guidance Document does not call for limiting energy dispatch to only units providing operating reserves. Rather it suggests maintaining a mix of reserve and non-reserve energy.").

[8] *See also* transmittal letter for October 10 tariff amendment at 5 (discussing this provision in section 34.3.2.2).

[9] BAL-002-1, Requirement R1.

allows the ISO to dispatch a combination of operating reserve capacity and energy-only capacity to resolve a major contingency.

However, BAL-002-1 must be applied to the ISO in conjunction with a relevant regional standard specific to the Western Electricity Coordinating Council ("WECC"), the regional entity that oversees compliance with NERC requirements in California and other western states. That WECC regional standard requires each balancing authority to maintain an amount of spinning reserve and non-spinning reserve (at least half of which must be spinning reserve) sufficient to meet the requirements of BAL-002-1.[10] Spinning and non-spinning reserve are the two types of operating reserves as defined by both NERC and the ISO.[11] Thus, although the ISO may dispatch a combination of operating reserve capacity and energy-only capacity to comply with BAL-002-1, it is the operating reserve capacity that has the primary role in compliance with this standard. This is exactly what tariff section 34.3.2.2 states.[12] Moreover,

---

[10] WECC Reliability Standard BAL-STD-002-0, Requirement WR1(a). The WECC Reliability Standard is listed on the page on NERC's website devoted to all the Reliability Standards, http://www.nerc.com/page.php?cid=2|20, and is available on that page at http://www.nerc.com/files/BAL-STD-002-0.pdf. The section of the WECC Reliability Standard cited above refers to NERC Reliability Standard BAL-002-0 (not BAL-002-1). This is because, at the time the WECC Reliability Standard was issued, only the original version of the NERC Reliability Standard (BAL-002-0), not the slightly revised version (BAL-002-1), was available.

[11] Glossary of Terms Used in NERC Reliability Standards at 34 (definition of operating reserve); ISO tariff, appendix A (definition of operating reserve). The Glossary of Terms Used in NERC Reliability Standards is available at the end of the document available on NERC's website at http://www.nerc.com/docs/standards/rs/Reliability_Standards_Complete_Set.pdf.

[12] The ISO maintains sufficient operating reserve to satisfy the WECC Reliability Standard discussed above. However, as explained in the declaration of ISO expert witness John Phipps attached to the October 10 tariff amendment, the ISO's experience has been that in a small number of cases operating reserve capacity has not responded to ISO dispatch instructions in major contingencies by providing 100 percent or more of the amount of requested response. Declaration of John Phipps, Attachment C to October 10 tariff amendment, at P 7 (explaining that operating reserve capacity provided 100 percent or more of the amount of requested response in

operating reserve is the product that has certified 10-minute ramping capability and is subject to the obligation under the ISO tariff to respond to dispatch instructions within 10 minutes.[13]

Consistent with BAL-002-1, the NERC guidance document presumes primary reliance on operating reserve capacity to resolve a major contingency but also allows the use of energy-only capacity for that purpose. The NERC guidance document states that, during the area control error event (*i.e.*, contingency) which was the reason for issuance of the guidance document, a number of resources either did not respond to the system operator's dispatch instructions or underperformed in meeting their share of the 10-minute reserve requirement based on their submitted parameters.[14] The guidance document notes that "under-performance was observed with both off-line (non-spinning) and on-line (spinning) resources."[15] The NERC guidance document also states that, coincident with the end of the 15-minute period required by NERC for recovering area control error, the system operator issued an economic (non-emergency) dispatch instruction. "This had the effect of dispatching down, or halting some of the on-line units ramping up, and instead, dispatched additional

---

almost all instances) ("Phipps Declaration"). Consequently, there may be situations in which the ISO also needs to dispatch energy-only capacity in order to resolve a major contingency.

[13] *See* ISO tariff sections 8.4.2(b), 8.4.3(a).

[14] NERC guidance document at 1. NERC noted underperformance by spinning and non-spinning reserve resources but did not state that either underperformance or failure to respond to the system operator's dispatch instructions was limited to such resources. *Id.*

[15] *Id.*

non fast-start units to come on-line. This electronic dispatch instruction delayed the ACE [area control error] recovery to its pre-disturbance value."[16]

To guard against a repeat of such an area control error event, the NERC guidance document proposes the following corrective actions: (1) an increase in reserve bias for 10-minute operating reserve; (2) an increase in the minimum 10-minute spinning reserve requirement; (3) a requirement that system operators "maintain a mix of Shared Activation of Reserves (SAR) and non-performance factor" at a level of at least 140 percent of first contingency loss; and (4) guidance to system operators to only approve an economic dispatch solution, following an emergency dispatch solution, when the contingency has been resolved.[17] Corrective actions (1) and (2) are based on operating reserve capacity having a primary role in resolving a contingency, while corrective action (3) contemplates that system operators may use both operating reserve capacity and energy-only capacity to resolve the contingency.

The ISO will deploy the real-time disturbance dispatch consistent with the corrective actions identified in the NERC guidance document. To satisfy corrective actions (1), (2), and (3), the ISO will ensure that sufficient operating reserve capacity and energy-only capacity are available for dispatch pursuant to the real-time disturbance dispatch. To satisfy corrective action (4), the ISO will deploy the real-time disturbance dispatch as an emergency rather than an economic dispatch solution, and will revert to an economic dispatch solution only

---

[16] *Id.*

[17] *Id.* at 1-2.

after a significant contingency has been resolved.[18] Further, all resources dispatched pursuant to the real-time disturbance dispatch will be dispatched up rather than dispatched down,[19] which the NERC guidance document cited as necessary to avoid delaying area control error recovery to the pre-disturbance value.[20]

NRG/Dynegy argue that the ISO may run afoul of corrective action (4) by reverting from emergency dispatch to economic dispatch too quickly following or even during a major contingency.[21] That will not occur under the real-time disturbance dispatch approach developed by the ISO. The ISO is required to act at all times in accordance with good utility practice and in a manner that ensures safe and reliable operation of the ISO controlled grid.[22] The ISO would not meet that duty if it were to revert to economic dispatch too soon. There is no reason to speculate that the ISO will return to economic dispatch too soon after it deploys the real-time disturbance dispatch.

---

[18] ISO tariff section 34.3.2.1 (setting forth actions the ISO will take when "returning to normal RTED [real-time economic dispatch] run after a RTCD [real-time contingency dispatch] run"); transmittal letter for October 10 tariff amendment at 5 n.13 ("Once recovery from the contingency event is completed, the ISO will revert either to the standard real-time contingency dispatch or to the real-time economic dispatch.").

[19] Transmittal letter for October 10 tariff amendment at 5 (stating that "no resource will be economically decremented during the disturbance dispatch mode of the contingency dispatch").

[20] By comparison, economic dispatch (*i.e.*, co-optimization) can dispatch resources either up or down.

[21] NRG/Dynegy at 8-9. NRG/Dynegy cite comments provided by SCE in the stakeholder process for the October 10 tariff amendment. But as noted above, SCE filed only a motion to intervene in this proceeding. Thus, SCE does not oppose any aspect of the October 10 tariff amendment.

[22] ISO tariff sections 4.4.1, 7.4.

In sum, the real-time disturbance dispatch is a just and reasonable measure to comply with the directives in both BAL-002-1 and the NERC guidance document, in order to mitigate risk to the bulk power system from an area control error event.[23]

B. The Risk to the Bulk Power System Identified by the ISO Supports the Tariff Revisions to Implement the Real-Time Disturbance Dispatch.

NRG/Dynegy and WPTF argue that the October 10 tariff amendment should be rejected as unnecessary, because the ISO gives no indication of a past or expected future failure to comply with BAL-002-1.[24] The protesters misconstrue the purpose of the October 10 tariff amendment. Its purpose is not to address a past or anticipated failure to satisfy BAL-002-1, but rather to minimize the potential risk to the bulk power system that could result from failure to recover from an area control error event, as required by BAL-002-1.

The ISO has a duty to ensure reliable operation of the ISO controlled grid consistent with applicable reliability criteria, which include the mandatory NERC Reliability Standards.[25] The October 10 tariff amendment is a proactive measure intended to ensure that the ISO is fully responding to the lessons learned from a recent contingency event elsewhere in the country and the guidance provided by

---

[23] The ISO's obligation under the Federal Power Act is to propose a just and reasonable set of tariff terms. The Federal Power Act does not require that the ISO's proposal be superior to all alternatives. *Cities of Bethany*, *et al. v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir.), *cert. denied*, 469 U.S. 917 (1984).

[24] NRG/Dynegy at 4-5; WPTF at 3.

[25] ISO tariff sections 4.4.2, 4.9.4; ISO tariff appendix A (definition of applicable reliability criteria); *see also* 18 C.F.R. § 40.2 (requiring compliance with reliability standards by each applicable user, owner, or operator of the bulk power system).

NERC as a result of that event. Indeed, as discussed in the report issued by the Commission and NERC staffs regarding the September 8, 2011 outages in Arizona and Southern California, implementing lessons learned is an important part of reducing the risk to the bulk power system.[26] The October 10 tariff amendment will ensure that the ISO has the right tools to prevent the risk to reliability that could result from a failure to recover from an area control error event, as required by BAL-002-1.[27] It was prudent and reasonable for the ISO, as the operator of the California wholesale electricity markets, to submit the tariff amendment as a measure to fulfill its obligation to maintain reliability.

The ISO expects that the conditions specified in the October 10 tariff amendment for use of the real-time disturbance dispatch will occur only infrequently. As Mr. Phipps, Shift Supervisor for the ISO, explained in his declaration, the ISO has experienced only six major contingencies in 2011 and 2012.[28] The ISO has no reason to expect major contingencies to occur to any greater extent in the future. Further, the ISO anticipates that on the rare occasions when the real-time disturbance dispatch mode is deployed, it will generally be for no more than two 10-minute intervals.[29] However, the anticipated rareness of the contingencies that would give rise to real-time

---

[26] *See Arizona-Southern California Outages on September 8, 2011: Causes and Recommendations* at 5-9, 63-113 and Appendix B (Apr. 27, 2012), available on the Commission's website at http://www.ferc.gov/legal/staff-reports/04-27-2012-ferc-nerc-report.pdf.

[27] As noted in the October 10 tariff amendment, failure to comply with BAL-002-1 may also result in NERC imposing substantial financial and regulatory penalties on the ISO. Transmittal letter for October 10 tariff amendment at 2.

[28] Phipps Declaration at P 4.

[29] Transmittal letter for October 10 tariff amendment at 5 n.13.

disturbance dispatch is insufficient reason to reject the October 10 tariff amendment. The Commission has accepted a number of ISO tariff provisions that were expected to be used only infrequently.[30]

Based on their opposition to the October 10 tariff amendment, it appears that NRG/Dynegy and WPTF implicitly advocate that, for now, the ISO should simply take the risk of an inability to recover from an area control error event, and that the ISO should take action in the future only if a violation of BAL-002-1 occurs. The ISO does not agree. As the Commission explained in Order No. 693, which authorized NERC to implement mandatory Reliability Standards, "the purpose of each Reliability Standard approved by the Commission in this Final Rule is to provide for the Reliable Operation of the Bulk-Power System and thereby *minimize the risk* of instability, uncontrolled or cascading failure on the Bulk-Power System."[31] Implementation of the real-time disturbance dispatch will satisfy that purpose by minimizing the risk to the bulk power system that may result from a violation of BAL-002-1, with which the ISO is required to comply. NRG/Dynegy and WPTF err in advocating that the appropriate course is to do nothing until after damage is done.

---

[30] *See, e.g.*, *California Independent System Operator Corp.*, 128 FERC ¶ 61,131, at P 20 (2009) ("The CAISO's proposed tariff revisions limit the authority to use a distributed generation reference bus on a going-forward basis to only those rare circumstances in which the CAISO is unable to clear the integrated forward market under the distributed load reference bus."); *California Independent System Operator Corp.*, 125 FERC ¶ 61,139, at P 20 (2008) (denying requests for rehearing of Commission order accepting ISO tariff provisions on penalties for load forecasting errors because "in the unlikely event of a significant forecasting error, the scheduling coordinator could be exempt from penalty"); *California Independent System Operator Corp.*, 116 FERC ¶ 61,274, at P 615 (2006) ("[W]e find that the CAISO has proposed a reasonable process, including relaxing certain constraints, to mitigate this situation, should it occur. Western has not demonstrated . . . that a better solution to this rare circumstance is available.").

[31] *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, at P 1928 (2007) (emphasis added).

Moreover, the Commission has authorized tariff changes submitted by Independent System Operators and Regional Transmission Organizations based on the potential of harm if the changes were not implemented.[32] The ISO demonstrates a potential for harm in the October 10 tariff amendment, and given the risk to the reliability of the bulk power system sought to be mitigated, makes an even stronger case for its tariff changes.

NRG/Dynegy and WPTF also argue that the analysis provided in Mr. Phipps's sworn declaration is not sufficient to support implementing the real-time disturbance dispatch. They assert that Mr. Phipps relied on merely "anecdotal" evidence in explaining that resources dispatched as energy-only do not respond to major contingencies as quickly or effectively as resources that have been awarded operating reserves.[33] The protesters mischaracterize Mr. Phipps's explanation. As Mr. Phipps stated, the ISO's analysis was based solely on the data for each of the six days in 2011 and 2012 on which the ISO experienced major contingencies.[34] NRG/Dynegy and WPTF also make the puzzling assertion that the October 10 tariff amendment does not state how the six days

---

[32] *See, e.g.*, *California Independent System Operator Corp.*, 134 FERC ¶ 61,070, at P 68 (2011) ("We do not agree with Financial Marketers that CAISO's proposal would result in over-collateralization. Rather, we find that the proposal is reasonable and will adequately protect other market participants from financial risk, while not discouraging the active participation of convergence bidders in CAISO's energy markets."); *California Independent System Operator Corp.*, 128 FERC ¶ 61,103, at P 162 (2009) ("[B]ecause we prefer a proactive approach to preventing gaming possibilities stemming from loop flow to a 'wait and see' approach where sensible, we continue to find that the CAISO acted appropriately in addressing loop flow concerns in designing the IBAA [Integrated Balancing Authority Area]."); *ISO New England Inc.*, 125 FERC ¶ 61,355, at P 33 (2008) ("[A]s explained by the Filing Parties, the use of the current Reserve Margin Gross-Up has the potential to harm New England because it can lead to under-procurement of resources in the Forward Capacity Auction.").

[33] NRG/Dynegy at 5-6; WPTF at 3-4.

[34] Phipps Declaration at P 4.

were selected.[35] The protesters overlook Mr. Phipps's explanation that "[t]he ISO selected these particular days because they were the days on which the ISO experienced major contingencies."[36]

The data from these days is not anecdotal; it is the comprehensive set of data from all of the days relevant to the ISO's proposal to implement the real-time disturbance dispatch. The ISO used this set of data from only the relevant days to determine that resources that supply energy-only capacity do not, as a whole, respond to real-time contingency dispatches as quickly or reliably as resources with certified and awarded operating reserves.[37]

NRG/Dynegy and WPTF ask why the ISO did not also analyze data on the other (*i.e.*, non-major) contingency events in 2011 and 2012.[38] The answer is that non-major contingency events will not addressed by, and thus are not relevant to, the proposed real-time disturbance dispatch.[39]

The ISO also explained that operating reserve capacity provides a benefit to reliability because it is tested and certified to ensure that it can respond to ISO dispatch instructions within 10 minutes, whereas energy-only capacity is not subject to any such requirements.[40] Further, the real-time disturbance dispatch

---

[35] NRG/Dynegy at 6; WPTF at 4.

[36] Phipps Declaration at 4. *See also* transmittal letter for RDRR tariff amendment at 3 (same).

[37] Phipps Declaration at P 5.

[38] NRG/Dynegy at 6; WPTF at 4.

[39] *See* Phipps Declaration at P 8 (explaining that "prioritization of operating reserve in the event of a *significant* disturbance will increase the ability of the ISO to recover from a significant contingency within the time frame specified in" BAL-002-1) (emphasis added).

[40] Transmittal letter for October 10 tariff amendment at 2-3.

will provide the benefit to reliability that all resources dispatched pursuant to that mode will be dispatched up rather than dispatched down.[41] This is consistent with the concern identified in the NERC guidance document that, during a contingency event, another system operator "issued an economic (non-emergency) electronic dispatch instruction" which "had the effect of dispatching down, or halting some of the on-line units ramping up."[42]

NRG/Dynegy and WPTF request that the Commission direct the ISO to provide them with the data the ISO used in its analysis or, alternatively, that the Commission establish a technical conference regarding the data.[43] There is no reason for the Commission to do either. The Commission does not need the data to determine whether the ISO's proposed tariff changes are just and reasonable and no technical conference concerning the data is needed. The purpose of the tariff changes is to implement the NERC guidance document, and Mr. Phipps's declaration provides factual support for observations shared during the stakeholder process that resources with operating reserve perform more reliably in a major disturbance than resources without operating reserve. In this regard, the ISO sufficiently described the data used in the analysis, and its implications, in the October 10 tariff amendment. As Mr. Phipps stated, the data compare the dispatch operating targets and actual performance of individual resources that

---

41 *Id.* at 5.

42 NERC guidance document at 1. The ISO notes that the real-time disturbance dispatch will not be used to address over-generation conditions.

43 NRG/Dynegy at 6-7; WPTF at 4.

submitted bids and were dispatched pursuant to those bids to address severe contingencies under the real-time contingency dispatch.[44]

In addition, the data is resource-specific data that the ISO considers confidential under the ISO tariff.[45] Further, the ISO would have no means of masking the resource-specific data so as to prevent market participants that received the data from being able to identify the specific resources. In addition, the ISO provided the data because certain market participants questioned the ISO's assertion in the stakeholder process that resources with operating reserve performed more reliably than resources without operating reserve. The ISO's proposed tariff revisions can be justified solely by virtue of the NERC guidance document. Therefore, the ISO should not be required to provide the data to any market participants.

NRG/Dynegy also list a number of questions that they suggest could be answered if the market participants had access to further data about the actions of other resources during contingency events.[46] Responding to these questions raises the same confidentiality concerns noted above. Moreover, these questions seem to be intended to support approaches to NERC compliance that are alternatives to the one reflected in the ISO's real-time disturbance dispatch proposal. As such, these questions are based on the false premise that the ISO must discard all alternatives before submitting the tariff revisions proposed in this

---

[44] Phipps Declaration at P 6.

[45] ISO tariff section 20.2.

[46] NRG/Dynegy at 6-7.

proceeding. The ISO is not required to consider all alternative tariff rules and then select the "best" option. The ISO's obligation under the Federal Power Act is simply to propose a just and reasonable set of tariff terms, not one that it superior to all alternatives.[47] The ISO has done so.

C. The October 10 Tariff Amendment Is Consistent with the Commission's Goal that, Wherever Possible, the ISO Should Use Market-Oriented Solutions to Resolve Contingencies.

NRG/Dynegy and WPTF incorrectly assert that the October 10 tariff amendment is not a market-oriented solution.[48] The protesters fail to consider that the October 10 tariff amendment satisfies the Commission's goal that, wherever possible, the ISO should use market-oriented solutions rather than a non-market-oriented solution – *i.e.*, exceptional dispatch – to resolve contingencies.

The Commission, in its October 2012 order accepting proposed tariff revisions to expand mitigation of exceptional dispatch in certain circumstances, stated its "concerns regarding CAISO's use of exceptional dispatch."[49] To address those concerns, the Commission "strongly encourage[d] CAISO to continue evaluating, through its stakeholder process, new market products . . . that may reduce CAISO's reliance on exceptional dispatches."[50] The Commission also directed the ISO to file an informational report within 12 months

---

47 *Cities of Bethany*, 727 F.2d at 1136 (utility needs to establish that its proposed rate design is reasonable, not that it is superior to all alternatives).

48 NRG/Dynegy at 2, 10-12; WPTF at 1-2, 5-6.

49 *California Independent System Operator Corp.*, 141 FERC ¶ 61,069, at P 43 (2012).

50 *Id.*

of the date of the order that describes "the steps [the ISO] has taken to reduce its reliance on exceptional dispatch since the issuance of this order."[51]

The real-time disturbance dispatch proposal implemented in the October 10 tariff amendment is more of a market-oriented solution for addressing contingencies than reliance on the ISO's existing exceptional dispatch authority. All resources dispatched pursuant to the real-time disturbance dispatch will be participants in the ISO markets. They will be dispatched in merit order subject to the prioritization of operating reserves. The energy bid of the highest-priced resource dispatched under the real-time disturbance dispatch will be used to set the market clearing price on a system-wide basis for all resources thus dispatched.[52] As a result, each of those resources will be paid its own energy bid or higher.

In contrast, if the ISO's proposed tariff revisions were rejected and the ISO were instead to use the existing mode of the contingency dispatch, which performs an economic dispatch, the ISO would have to utilize exceptional dispatch to ensure access to operating reserve capacity to address a major contingency.[53] All of the exceptional dispatches would be out-of-market, and the prices paid to the exceptionally dispatched resources would not be reflected in the locational marginal price. Thus, the real-time disturbance dispatch mode of

---

[51] *Id.* at P 45.

[52] ISO tariff section 34.3.2.2.

[53] Because the existing mode of the contingency dispatch performs an economic dispatch, the ISO cannot rely on the contingency dispatch to access all operating reserve. Accordingly, the ISO would have to utilize exceptional dispatch to ensure that all of the operating reserve was dispatched.

the contingency dispatch promotes the Commission's goal of reducing the ISO's reliance on exceptional dispatch through a market-oriented solution.

To the extent NRG/Dynegy and WPTF are suggesting that the ISO should be limited to an economic dispatch without regard to the contingency conditions that support the real-time disturbance dispatch, the ISO notes that the NERC guidance document states that system operators should "only approve an 'economic' electronic dispatch solution, following an 'emergency' electronic dispatch solution, when the contingency has been resolved."[54]

NRG/Dynegy and WPTF fail to recognize that energy-only capacity has a number of opportunities to receive payment. First, as explained above, any such capacity that is dispatched after all operating reserve capacity has been utilized pursuant to the real-time disturbance dispatch will be paid its energy bid or higher. And even energy-only capacity that is not dispatched in the real-time disturbance dispatch can still receive the real-time locational marginal price for any energy generated above the day-ahead schedules. This could be either because (1) the energy-only resource was already operating at a level higher than the day-ahead market schedule and the real-time disturbance dispatch is keeping the resource at that level (or higher), or (2) the energy-only resource deviates and provides more energy, and thus is paid the uninstructed imbalance energy price, which is the real-time locational marginal price.[55]

---

[54] NERC guidance document at 2.

[55] ISO tariff section 11.5.2.

NRG/Dynegy also hypothesizes about possible adverse impacts after a major contingency is over.[56] Not only does NRG/Dynegy fail to provide factual support for its hypothesis, even if adverse impacts were to occur, they can be expected to be minimal. Any minimal impacts are heavily outweighed by the benefits to reliability of the real-time disturbance dispatch.

D. The Real-Time Disturbance Dispatch Does Not Unduly Discriminate Between Similarly Situated Market Participants.

NRG/Dynegy and WPTF argue that the real-time disturbance dispatch is unduly discriminatory.[57] There is no merit in their arguments.

The Commission has found that discrimination is undue when there is a "difference in rates or services among similarly situated customers that is not justified by some legitimate factor."[58] It is not unduly discriminatory to dispatch operating reserve capacity before energy-only capacity pursuant to the real-time disturbance dispatch. Operating reserve is the very product that is certified for 10-minute responsiveness and is the most reliable product the ISO can dispatch to recover from contingencies. In addition, although the ISO believes that the NERC guidance document is sufficient justification for the ISO's proposed tariff changes, the demonstrated difference in performance between those two types of capacity during major contingencies also justifies giving dispatch priority to the operating reserve capacity.

---

56 NRG/Dynegy at 11.

57 NRG/Dynegy at 9-12; WPTF at 5-6.

58 *Southwest Power Pool, Inc.*, 137 FERC ¶ 61,075, at P 52 (2011).

Operating reserve capacity is a different product than energy-only capacity for purposes of addressing area control error contingencies. The difference stems from the fact that, in order to be operating reserve capacity, a resource must be certified to supply the requested MW amount within 10 minutes of receiving an ISO dispatch instruction. Such a resource will be subject to performance audits and unannounced testing to ensure that it can respond within a 10-minute period.[59] On the other hand, a resource that is not operating reserve capacity is subject to none of those requirements. Therefore, operating reserve capacity and energy-only capacity are not similarly situated with regard to their deployment under the real-time disturbance dispatch.

Nor is there any undue discrimination in the rate paid to dispatched operating reserve capacity and to dispatched energy-only capacity. As discussed above, both types of capacity will receive the same payment – the energy bid of the highest-priced resource dispatched under the real-time disturbance dispatch for any incremental real-time energy over day-ahead schedules.

E. The Commission Should Accept a Minimum Threshold for Implementing the Real-Time Disturbance Dispatch.

NRG/Dynegy and WPTF argue that the ISO has not justified its proposal to have the ability to deploy the real-time disturbance dispatch when 300 MW or more of capacity is needed to respond to a major contingency.[60] This 300 MW

---

[59] Transmittal letter for October 10 tariff amendment at 2-3 (citing relevant ISO tariff provisions).

[60] NRG/Dynegy at 12-14; WPTF at 6-7.

minimum threshold gives the ISO less discretion to deploy the real-time disturbance dispatch than the ISO already has to deploy the real-time contingency dispatch pursuant to existing provisions in tariff section 34.3.2. The existing tariff provisions allow ISO operations to run the real-time contingency dispatch "in response to a significant Contingency event, such that waiting until the next normal RTD [real-time dispatch] run is not adequate and/or Operating Reserve identified as Contingency Only need[s] to be activated in response to the event." The existing tariff language does not specify what a significant contingency event is, whereas the tariff language proposed in the October 10 tariff amendment specifies that the real-time disturbance dispatch may not be deployed until after the 300 MW minimum threshold is reached.

NRG/Dynegy and WPTF argue that, if the Commission accepts the October 10 tariff amendment, it should set the minimum threshold at either 482 MW (which represents 80 percent of the net qualifying capacity of the Otay Mesa Energy Center located in the San Diego sub-region) or 880 MW (which represents 80 percent of the largest single generator contingency within the ISO balancing authority area). Despite the claims of the protesters that their proposals – not the ISO's – are superior, the proper legal standard is whether the *ISO's* proposal is just and reasonable under Section 205 of the Federal Power Act.[61] Specifically, as the Commission has explained, "the courts and this Commission have recognized that there is not a single just and reasonable rate. Instead, we evaluate [proposals under Section 205] to determine whether they

[61] 16 U.S.C. § 824d. Under Section 15 of the ISO tariff, the ISO is the entity authorized to submit filings for Commission approval pursuant to Section 205 of the FPA.

fall into a zone of reasonableness. So long as the end result is just and reasonable, the [proposal] will satisfy the statutory standard."[62] For the reasons the ISO has explained, the end result of the 300 MW minimum threshold is just and reasonable.

Nevertheless, the ISO would not object to using 480 MW as a target that it would employ unless fact-specific circumstances (such as the loss of the largest unit in a sub-region) require a different minimum threshold, consistent with good utility practice and the ISO's duty to operate the ISO controlled grid in a safe and reliable manner.[63] Thus, the ISO could revise tariff section 34.3.2.2 on compliance to provide that the ISO will implement the real-time disturbance dispatch when the level of capacity needed to respond to a major contingency is equal to or greater than 80 percent of the largest single generator contingency within the ISO's smallest sub-region. When the Otay Mesa unit is in service, this value will be 482 MW. Alternatively, if the Commission determines that section 34.3.2.2 should reflect a fixed minimum threshold as proposed in the October 10 tariff amendment, the 300 MW threshold should be maintained to address the possibility that the Otay Mesa unit goes off-line.

---

[62] *Calpine Corp. v. California Independent System Operator Corp.*, 128 FERC ¶ 61,271, at P 41 (2009) (citations omitted). *See also New England Power Co.,* 52 FERC ¶ 61,090, at 61,336 (1990), ***aff'd, Town of Norwood v. FERC,*** 962 F.2d 20 (D.C. Cir. 1992) (rate design proposed need not be perfect, it merely needs to be just and reasonable), *citing Cities of Bethany*, 727 F.2d at 1136 (utility needs to establish that its proposed rate design is reasonable, not that it is superior to all alternatives).

[63] *See* ISO tariff section 7.4.

NRG/Dynegy and WPTF assert that the ISO has not explained why the minimum threshold should be determined on a sub-regional basis.[64] The minimum threshold should be determined on this basis in order to permit it to be applied on any scale necessary on the ISO controlled grid, whether sub-regional or system-wide. Further, as is true for the existing real-time contingency dispatch, the ISO proposes to be allowed under the real-time disturbance dispatch to activate operating reserves identified as contingency-only either on a resource-specific basis or for all such resources.[65] Thus, just as is the case for the real-time contingency dispatch, ISO operations will perform the real-time disturbance dispatch on a resource-specific basis to address more localized contingencies and will perform such dispatch on a broader basis to resolve more general contingencies.

[64] NRG/Dynegy at 13; WPTF at 6.

[65] ISO tariff sections 34.3.2.1, 34.3.2.2.

III. Conclusion

For the reasons explained above and in the October 10 tariff amendment, the Commission should accept the tariff amendments to implement real-time disturbance dispatch, subject only to a possible further revision on compliance to implement a proposed change to the minimum threshold as discussed in this answer.

Respectfully submitted,

/s/ Bradley R. Miliauskas

Nancy Saracino
General Counsel
Sidney M. Davies
Assistant General Counsel
California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7144
Fax: (916) 608-7296
E-mail: nsaracino@caiso.com
sdavies@caiso.com

Sean A. Atkins
Bradley R. Miliauskas
Alston & Bird LLP
The Atlantic Building
950 F Street, NW
Washington, DC 20004
Tel: (202) 239-3300
Fax: (202) 239-3300
E-mail: sean.atkins@alston.com
bradley.miliauskas@alston.com

Attorneys for the California Independent System Operator Corporation

Dated: November 15, 2012

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all of the parties listed on the official service list for the above-referenced proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Washington, D.C. this 15th day of November, 2012.

/s/ Bradley R. Miliauskas
Bradley R. Miliauskas