

145 FERC ¶ 61,254
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

California Independent System Operator Corporation Docket No. ER13-2452-000

ORDER CONDITIONALLY ACCEPTING TARIFF REVISIONS

(Issued December 19, 2013)

1. On September 25, 2013, the California Independent System Operator Corporation (CAISO) filed revisions to its open access transmission tariff (tariff) to lower the energy bid floor and modify the bid cost recovery settlement rules to pay bid cost recovery separately for the day-ahead and real-time markets. CAISO's proposal includes several other revisions to modify the uplift payment process and eliminate potential incentives for adverse market behavior. In this order, we conditionally accept CAISO's proposed tariff revisions to be effective April 1, 2014, subject to CAISO submitting a compliance filing within 30 days of the date of this order, as discussed below.

I. Background

2. The CAISO tariff permits resources to recover their energy bid costs, along with start-up and minimum load costs, through bid cost recovery payments when market revenues do not cover these costs.¹ Under the current bid cost recovery rules, CAISO nets a resource's market costs and revenues across the individual market days and then across the day-ahead and real-time markets for the same trading day. If a resource's combined revenues from the day-ahead and real-time markets exceed its combined costs in the two markets, the resource does not receive a bid cost recovery payment.²

¹ For a more detailed description and background on CAISO's bid cost recovery mechanism, see *Cal. Indep. Sys. Operator Corp.*, 135 FERC ¶ 61,110 (2011) (May 2011 Order); and *Cal. Indep. Sys. Operator Corp.*, 136 FERC ¶ 61,118 (2011) (August 2011 Order); see also CAISO Tariff, § 11.8, *et seq.*

² See CAISO Tariff, § 11.8, *et seq.*

3. In the instant filing, CAISO proposes revisions to help accommodate the anticipated increase in variable energy resources in an efficient and reliable manner, and to enhance overall market efficiency by increasing the supply of economic real-time bids. In particular, CAISO states that it has identified a need to encourage more decremental economic bids in real-time, which will enable CAISO to address over-generation conditions through the market. In addition to addressing over-generation situations, CAISO states that the bid cost recovery revisions proposed here are designed to create incentives for all resources to submit economic bids in real-time, both incremental and decremental, and follow dispatch instructions so CAISO can more efficiently dispatch resources to reliably meet system needs.³ As a result of the changes to the bid cost recovery settlement rules, and based on CAISO's experience with bid cost recovery, CAISO proposes to implement new mitigation measures as a safeguard against inflated bid cost recovery and residual imbalance energy payments.⁴

II. CAISO Proposal

A. Bid Floor

4. CAISO explains that, currently, during periods of over-generation, it pays resources to decrease output.⁵ When it experiences an insufficient supply of bids to decrease output, CAISO states that it addresses the over-generation condition by issuing dispatch instructions that are not based on economic bids. CAISO states that issuing uneconomic dispatch instructions can result in the inefficient dispatch of resources. CAISO believes that more real-time economic decremental bids will help to improve economic dispatch, particularly given the projected increase in variable energy resources.⁶

³ *Id.* at 4-10.

⁴ *Id.* at 42. Residual imbalance energy is the energy attributable to ramping up to or down from a dispatch to a different operating level.

⁵ A negative bid signals to CAISO that a market participant is willing to decrease output as long as it is paid a certain amount to do so. For example, a negative \$20/MWh bid in real-time means the resource is offering to not generate if it is paid at least \$20/MWh.

⁶ CAISO Proposal at 9.

5. Under CAISO's current tariff, economic energy bids can be no lower than the negative \$30/MWh bid floor.⁷ CAISO explains that variable energy resources generally receive, in addition to market revenues, production tax credits, renewable energy credits, and contractual energy payments, which amount to approximately \$130/MWh for the average wind resource.⁸ CAISO adds that contract penalties associated with curtailing energy production may also encourage variable energy resources to produce rather than submit economic decremental bids. Therefore, CAISO claims that a bid floor of negative \$150/MWh, as opposed to the current floor of negative \$30/MWh, will, in most cases, enable wind resources, and potentially some solar resources, to cover their opportunity costs for not producing. Thus, CAISO anticipates that lowering the bid floor to negative \$150/MWh will encourage variable energy resources to submit economic decremental bids in real-time.⁹

B. Bid Cost Recovery

6. In order to create additional incentives for all resources to submit economic real-time bids, CAISO proposes to calculate bid cost recovery separately for the day-ahead and real-time markets. CAISO asserts that the current netting rules could provide disincentives for real-time economic bidding because profits earned in real-time could offset day-ahead bid costs, which could lower or eliminate the bid cost recovery payment the resource would otherwise receive. Further, CAISO contends that the current netting rules could dampen the effectiveness of the lower bid floor in eliciting more real-time economic decremental bids.¹⁰

⁷ *Id.* at 16; CAISO Tariff, § 39.6.1.4.

⁸ CAISO Proposal at 18.

⁹ CAISO acknowledges that the proposed negative \$150/MWh bid floor does not cover the opportunity costs for all renewable resources and states its intent to evaluate the impact of this reduction based on a full year's data. CAISO states that if there are no significant negative effects associated with the implementation of the negative \$150/MWh bid floor, it will initiate a stakeholder process to lower the bid floor to negative \$300/MWh. *Id.* at 20.

¹⁰ *Id.* at 23-25. CAISO notes that this proposed change would align the CAISO bid cost recovery rules more closely with other regional transmission organizations and independent system operators that do not net bid cost recovery costs and revenues across their markets. *Id.* at 25.

7. CAISO notes that a criticism of its proposal to separate bid cost recovery for the day-ahead and real-time markets is that the overall cost of bid cost recovery payments to market participants may increase up to an estimated 20 percent. CAISO notes that the estimate largely assumes no change in bidding behavior as a result of the separation, even though the rule change is specifically designed to incent different bidding behavior. CAISO contends that, if its proposal is successful in eliciting more economic bids in the real-time market, bid cost recovery payments could actually decrease. CAISO states the reason for its belief that the increase in economic decremental bids in the real-time market will reduce bid cost recovery payments overall is because its markets should experience fewer downward price spikes with the change. Therefore, CAISO argues that the potential benefits of separating day-ahead and real-time bid cost recovery settlements exceed the concerns over the potential increase in bid cost recovery payments.¹¹

8. In light of its proposal to separate day-ahead and real-time bid cost recovery, CAISO also proposes revisions to its bid cost recovery rules regarding the calculation of start-up costs for short-start resources as part of its effort to encourage economic real-time bids.¹² Under the revised provisions, day-ahead bid cost recovery will not be modified if a resource is dispatched under its day-ahead commitment, even if the real-time dispatch instruction advances or delays the start-up from what was committed in the day-ahead market. Further, CAISO proposes special rules for accounting for minimum load costs of multi-stage generators to capture the costs and revenues for a multi-stage generator's actual movement between the two configurations and prevent double recovery of costs under certain situations.¹³ In addition, CAISO proposes to revise its tariff to ensure that, when a resource receives and follows a decremental dispatch instruction in real-time, its day-ahead bid costs are not reduced. CAISO states that this revision is consistent with separating day-ahead and real-time bid cost recovery payments

¹¹ *Id.* at 40; Testimony of Bradford Cooper, Ex. No. ISO-1 at 22-23 (included as Attachment O to CAISO Proposal) (Cooper Testimony).

¹² Short-start resources have a cycle time of less than five hours, a start-up time of less than two hours, and can be fully optimized with respect to their cycle time. CAISO Proposal at 26.

¹³ CAISO highlights that the new rule would only apply in cases where the resource is committed by CAISO; CAISO asserts that there is no need to apply the rule to self-schedules because the possibility of double recovery does not occur because self-schedules are not eligible for bid cost recovery. *Id.* at 27-28.

and will ensure that resources are not penalized for non-delivery when they are complying with CAISO real-time dispatch instructions.¹⁴

9. Under the current tariff, CAISO applies a day-ahead metered energy adjustment factor to adjust a resource's day-ahead costs and revenues in proportion to energy delivered by the resource. Here, CAISO proposes new tariff rules intended to guard against the unintended expansion of bid cost recovery as a result of applying the day-ahead metered energy adjustment factor. CAISO states that these rules elaborate upon rule changes made in 2011 to fully account for revenue from delivered energy and to ensure that resources could not engage in bidding strategies to expand bid cost recovery payments.¹⁵ The proposed revisions specify how the day-ahead metered energy adjustment factor will be applied to adjust a resource's costs and/or revenues under different combinations of positive or negative costs and revenues. Further, to account for the possibility of unforeseen scenarios under which the use of the day-ahead metered energy adjustment factor could be used to expand bid cost recovery payments, CAISO proposes a "catch-all" provision in its tariff that permits CAISO to recover overpayments through billing adjustments in the event that it discovers an instance where use of the day-ahead metered energy adjustment factor has the effect of expanding a bid cost recovery payment.¹⁶

10. CAISO also proposes revisions to its methodology for calculating real-time bid cost recovery to more accurately capture eligible costs and revenues. CAISO proposes to replace the real-time metered energy adjustment factor, which adjusts costs and revenue in the real-time market in proportion to the energy actually delivered by the resource, with a real-time performance metric that not only adjusts costs and revenues based on delivered energy, but also accounts for how closely the resource follows CAISO's instructions to increase or decrease output in real-time. CAISO claims that this change will adjust a resource's bid cost recovery payments to ensure that only energy dispatched by CAISO is eligible for bid cost recovery, without discouraging the resource from submitting economic bids in real-time. CAISO also proposes to incorporate the rules for specific cost/revenue combinations and the "catch-all" adjustment provision described above into the real-time performance metric provisions.¹⁷

¹⁴ *Id.* at 29-30.

¹⁵ *Id.* at 29 (citing May 2011 Order, 135 FERC ¶ 61,110).

¹⁶ *Id.* at 31-33.

¹⁷ *Id.* at 34-35.

11. CAISO proposes to apply a tolerance band to both the day-ahead metered energy adjustment factor and the real-time performance metric to permit minor variations in a resource's output to avoid reducing bid cost recovery payments for small deviations from dispatch that may occur due to various operational constraints. The tolerance band is bounded at the higher of either three percent of the resource's maximum operating point or five MW.¹⁸ CAISO also proposes to add an additional ramping tolerance criterion to accommodate instances where a resource's ramp rate can change over the course of the interval.¹⁹

C. Mitigation Measures

12. In light of its proposal to separate bid cost recovery for the day-ahead and real-time markets, as discussed above, CAISO proposes new safeguards and mitigation measures it believes are necessary to prevent inflated bid cost recovery and residual imbalance energy payments. CAISO reports that its experience over the past two years in dealing with market behavior designed to unjustly expand bid cost recovery payments demonstrates the need for safeguards against market behavior that is not otherwise rational but solely for the purpose of overly expanding bid cost recovery and residual imbalance energy payments. Thus, CAISO proposes to implement a persistent deviation metric that will compare the amount that the real-time market dispatches a resource up or down in an interval to the amount the resource actually moves up or down.²⁰ CAISO explains that the persistent deviation metric will look at the deviations from CAISO dispatch instructions during 12 ten-minute settlement intervals over a rolling two-hour window. CAISO states that it will flag a settlement interval if a deviation is in a direction that would inflate bid cost recovery or residual imbalance energy payments and the metric exceeds a ten percent threshold. CAISO asserts that this threshold will avoid triggering the persistent deviation metric for small deviations. Under CAISO's proposal, if four or more intervals of the previous 12 are flagged as exceeding the persistent deviation metric threshold, then mitigation, as described below, will apply.²¹

13. CAISO reports that an analysis based on sample data indicates that 97.5 percent of resource hours had three or fewer flagged settlement intervals. Further, CAISO reports

¹⁸ Under its current tariff, CAISO applies the same tolerance band to the real-time metered energy adjustment factor.

¹⁹ *Id.* at 36-37.

²⁰ *Id.* at 42, 46-47.

²¹ *Id.* at 44-47.

that a study conducted by its Department of Market Monitoring indicated that the proposed four-interval threshold would be effective in curbing the potential abuse of settlement rules for bid cost recovery and residual imbalance energy without diminishing incentives to participate in the real-time market. Thus, CAISO asserts that this proposal strikes a balance between dissuading participants from engaging in adverse behavior and ensures that resources are not unfairly penalized for inadvertent deviations. CAISO acknowledges that it may need to refine the parameters of its metric over time and has committed to evaluate these thresholds after collecting a year's worth of data.²²

14. With respect to mitigation for bid cost recovery, if a resource is found to have persistently deviated from CAISO's dispatch instructions, CAISO will calculate the real-time energy bid costs based on the locational marginal price instead of the resource's energy bid.²³ For residual imbalance energy, CAISO notes that in 2012 it modified the settlement rules to ensure that resources could not expand their payments by persistently deviating in real-time.²⁴ Here, CAISO proposes to eliminate the broad residual imbalance energy measures accepted in the October 2012 Order and adopt new, more tailored mitigation measures that will apply only when a resource persistently deviates from CAISO dispatch instructions. In those instances, CAISO proposes to settle residual imbalance energy based on the locational marginal price rather than the resource's energy bid.²⁵

D. Other Revisions

15. CAISO proposes to revise its tariff to align the settlement of exceptional dispatch and the associated bid cost recovery and residual imbalance energy. CAISO contends that this alignment is necessary because, under its current tariff, a resource that receives an exceptional dispatch could receive bid cost recovery or residual imbalance energy payments at an unmitigated price even though the exceptional dispatch itself was

²² *Id.* at 48.

²³ *Id.* at 45-46.

²⁴ *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,069, at P 42 (2012) (October 2012 Order). As a result of the revisions accepted in the October 2012 Order, all residual imbalance energy was settled at a mitigated rate.

²⁵ CAISO Proposal at 44-45.

mitigated. Under the proposed revisions, if the exceptional dispatch is mitigated, the bid cost recovery and residual imbalance energy payments would also be mitigated.²⁶

16. CAISO also proposes to revise its tariff to align the settlement of ramping energy associated with a temporary increase (i.e., a re-rate) in the minimum load of a resource with the bid cost recovery settlement during that period of re-rate. CAISO explains that the revised method will effectively make the resource a price taker, which would not be eligible for bid cost recovery, in intervals when it is ramping up to and down from its temporary minimum level. CAISO also proposes to settle residual imbalance energy during a re-rate ramp-down period that extends past the end of an hour at the locational marginal price.²⁷

17. Additionally, CAISO proposes to limit bid cost recovery for minimum load in cases where resources generate above their real-time dispatch instructions to avoid a shut-down instruction. CAISO explains that, while the prior netting rules dampened incentives for this type of behavior, the separation of bid cost recovery for the two markets can create perverse incentives not to follow a CAISO instruction in order to obtain uplift payments that are not reflective of CAISO's economic dispatches.²⁸

E. Effective Date

18. CAISO requests an effective date of April 1, 2014, for the proposed tariff revisions. Because the requested effective date will be more than 120 days after the filing of these revisions, CAISO requests a waiver of section 35.3 of the Commission's regulations.²⁹ CAISO argues that good cause exists for granting this waiver because the instant revisions are part of a comprehensive set of market design adjustments to facilitate the economic and reliable integration of variable energy resources in the CAISO market. CAISO states that it will need sufficient time for its software vendor to make any changes as a result of the Commission's order on this matter. Thus, CAISO explains

²⁶ *Id.* at 52. The tariff provisions for exceptional dispatch mitigation are found in section 39.7 of the CAISO tariff.

²⁷ *Id.* at 52-53.

²⁸ *Id.* at 53-55.

²⁹ 18 C.F.R. § 35.3 (2013).

that it needed to make this filing well in advance of the requested effective date, and also requests Commission action on this matter by November 27, 2013.³⁰

III. Notice and Responsive Pleadings

19. Notice of CAISO's proposed tariff revisions was published in the *Federal Register*, 78 Fed. Reg. 61,944 (2013), with protests or motions to intervene due on or before October 16, 2013. Timely motions to intervene were filed by the NRG Companies;³¹ the City of Santa Clara, California; the California Department of Water Resources State Water Project; Northern California Power Agency; and Pacific Gas & Electric Company. Timely motions to intervene and comments/protests were submitted by Southern California Edison Company (SoCal Edison); Calpine Corporation (Calpine); Electric Power Supply Association (EPSA); Exelon Corporation (Exelon); the Western Power Trading Forum (WPTF); and the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (Six Cities). CAISO filed an answer.

IV. Comments and Protests

20. Stakeholders generally support CAISO's proposal and, in particular, emphasize that CAISO's proposed tariff revisions should be adopted as a package in order to address potential incentives for adverse market behavior that could expand bid cost recovery uplift beyond its intended purpose.³² Several stakeholders do, however, raise concerns regarding certain aspects of CAISO's proposal, as discussed below.

21. Six Cities state that CAISO's proposal to lower the bid floor to negative \$150/MWh may be lower than necessary to achieve the intended objective, but concede that the proposal is better than other alternatives discussed during the stakeholder process and is acceptable. Six Cities also express concern that CAISO's proposal may result in

³⁰ CAISO Proposal at 55-57.

³¹ For purposes of this proceeding, the NRG Companies are NRG Power Marketing LLC; GenOn Energy Management, LLC; Cabrillo Power I LLC; Cabrillo Power II LLC; El Segundo Power LLC; NRG Delta LLC; NRG Marsh Landing LLC; NRG California South LP; 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; and Avenal Solar Holdings LLC.

³² Six Cities October 16, 2013 Comments at 2 (Six Cities Comments); Calpine October 16, 2013 Comments at 4 (Calpine Protest); WPTF October 16, 2013 Comments at 4 (WPTF Comments).

bid cost recovery awards that exceed resources' actual bid costs, cause unintended results, and present opportunities for new gaming strategies. Six Cities request that the Commission direct CAISO to maintain careful monitoring of the impacts of its proposal and to publish this information in its Weekly Market Performance reports.³³

22. EPSA and Exelon state that they do not protest CAISO's filing; however, both parties assert that CAISO's proposal highlights the broader policy issue of accurate and efficient price formation in Commission-jurisdictional markets. For example, Exelon claims that variable energy resources frequently receive out-of-market subsidies that are not available to base load suppliers. Exelon contends that, while base load suppliers must pay negative clearing prices to maintain reliability, variable energy resources are not affected by negative pricing until market prices dip below the level of their out-of-market subsidies. Exelon asserts that CAISO may not have reasonably considered the effects of negative bid floors on market-clearing prices and how the resulting prices may affect other suppliers.³⁴ Thus, EPSA and Exelon urge the Commission to convene a technical conference in a separate proceeding to examine the effects of subsidized entrants and negative pricing on price formation in all Commission-jurisdictional energy and ancillary services markets.³⁵

23. Calpine and WPTF protest CAISO's proposal to net bid costs and market revenues from the real-time market across a 24-hour period. Calpine argues that CAISO's current bid cost recovery settlement provisions have become unjust and unreasonable and, therefore, it supports CAISO's proposal to separate the settlement of bid cost recovery between the day-ahead and real-time markets in principle.³⁶ Nevertheless, Calpine and WPTF argue that, with a 24-hour netting period, a resource's unrecovered costs associated with one real-time bid may be offset by margins earned from a separate, independent real-time bid the resource submitted earlier or later that day. Thus, both parties contend that CAISO's proposal to net costs and revenues over a 24-hour period in the real-time market suffers from similar deficiencies as the current netting rules because it does not assure resources recovery of their true marginal costs associated with a discrete economic bid awarded in the real-time market.³⁷ Further, Calpine asserts that

³³ Six Cities Comments at 2-5.

³⁴ Exelon October 16, 2013 Comments at 3-5 (Exelon Comments).

³⁵ EPSA October 16, 2013 Comments at 2, 4; Exelon Comments at 5.

³⁶ Calpine Protest at 4-5.

³⁷ *Id.* at 6; WPTF Protest at 4.

CAISO's stated goal of creating incentives for real-time economic bidding cuts against 24-hour netting because a profitable position early in the day could reduce a resource's incentives to submit economic bids in later hours.³⁸

24. Calpine argues that CAISO cannot satisfy its burden to demonstrate that its proposal to net real-time bid cost recovery payments over a 24-hour period is just and reasonable by simply relying on the fact that CAISO's current tariff nets real-time costs and revenues over a 24-hour period before they are netted against day-ahead costs and revenues. Calpine contends that, because CAISO proposes to separate day-ahead and real-time bid cost recovery in the instant filing, CAISO must expressly present evidence of the justness and reasonableness of the 24-hour netting period in this new context. Therefore, Calpine requests that the Commission reject CAISO's proposal to use a 24-hour netting period for its calculation of real-time bid cost recovery and direct CAISO to implement hourly netting in the real-time market. Alternatively, WPTF recommends that CAISO calculate real-time bid cost recovery over individual commitment periods throughout the day.³⁹

25. In addition, WPTF argues that the tariff rules relating to bid cost recovery under the registered cost option may create market inefficiencies because, under CAISO's current tariff, a resource's registered costs must remain fixed for 30 days.⁴⁰ WPTF argues that, during the 30-day fixed period, it is possible that a resource's actual start-up and minimum load costs may be lower than the registered costs, which could result in the CAISO market software dispatching resources with higher actual costs. Thus, WPTF requests that the Commission direct CAISO to revise its tariff to permit resources using the registered cost option to bid their start-up and minimum load costs each day, subject to such bids not exceeding their 30-day registered costs.⁴¹

26. CAISO maintains that its proposal to net real-time bid cost recovery over a 24-hour period is just and reasonable. CAISO argues that the concerns expressed by Calpine

³⁸ Calpine Protest at 7.

³⁹ WPTF Protest at 4.

⁴⁰ In order to specify their start-up and minimum load costs, scheduling coordinators select either a proxy cost option or a registered cost option. The proxy cost option is cost-based and can be bid daily; the registered cost option allows scheduling coordinators to register fixed start-up and minimum load cost values at any level up to the registered cost cap once every thirty days. CAISO Tariff, § 30.4.

⁴¹ *Id.* at 5.

and WPTF flow from an inaccurate characterization of the purpose for separating bid cost recovery for the day-ahead and real-time markets. CAISO explains that the purpose of this proposal is not to maximize compensation for resources in the real-time, but to eliminate disincentives to bidding in the real-time market. CAISO contends that it has shown that its proposed tariff revisions will accomplish that purpose and that further disaggregation of the netting interval is not needed to satisfy the objectives of these revisions.⁴²

27. CAISO asserts that the appropriate legal standard for evaluating the Calpine and WPTF protests is whether CAISO's proposal is just and reasonable under section 205 of the Federal Power Act (FPA). Further, CAISO notes that the Commission has already found that netting on a daily basis is a "reasonable mechanism for cost recovery."⁴³ CAISO contends that, while Calpine and WPTF have shown that resources may be able to obtain higher bid cost recovery payments if CAISO were to net on an hourly basis, they have not shown that a 24-hour netting period results in an unjust and unreasonable compensation mechanism.⁴⁴

28. CAISO explains that, even if it were to explore the idea of more granular netting, it would need to do so through a new stakeholder process that is designed to fully consider the market impacts of such a change. Moreover, CAISO contends that any future bid cost recovery enhancements should be considered only after CAISO gains experience with the separation of the day-ahead and real-time bid cost recovery. CAISO also argues that including the modification requested by Calpine and WPTF would require software modifications that could delay the planned April 1, 2014 implementation for the revisions proposed in the instant filing. CAISO asserts that this delay could impact the implementation timeline for other important market initiatives scheduled for 2014.⁴⁵

29. CAISO argues that WPTF's request to permit daily bidding of start-up and minimum load costs up to a resource's registered costs is beyond the scope of this proceeding. CAISO asserts that the tariff provisions requiring that registered costs remain fixed for 30 days are not modified by the instant filing. In addition, CAISO

⁴² CAISO October 31, 2013 Answer at 8-9.

⁴³ *Id.* at 9 (quoting *Cal. Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,274, at P 504 (2006) (September 2006 Order)).

⁴⁴ *Id.* at 9-10.

⁴⁵ *Id.* at 11-16.

contends that WPTF has not shown that the existing tariff provisions are unjust and unreasonable.⁴⁶

30. With regard to Six Cities' request that CAISO include information on bid cost recovery payments in its Weekly Market Performance reports, CAISO agrees to maintain careful monitoring of the impacts of the revisions to the bid cost recovery rules and to provide more transparency on these impacts. To accomplish this, CAISO states that it will maintain, for at least one year after the implementation of these revisions, a standing item on the agenda for the Market Performance and Planning Forum stakeholder meetings, which are held approximately every eight weeks. Further, CAISO notes that it already provides a monthly report on bid cost recovery payments.⁴⁷ CAISO states that it will update these reports to account for the new market rules, but argues that there is little value in switching from monthly to weekly reporting because the data used in these reports are not available on a weekly basis.⁴⁸

V. Discussion

A. Procedural Matters

31. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2013), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

32. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2013), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We will accept the answer filed by CAISO because it has provided information that assisted us in our decision-making process.

B. Commission Determination

33. We find that CAISO's proposed tariff revisions, as modified by this order, are just and reasonable and conditionally accept them, subject to further compliance, as discussed below. We find that the proposed revisions are an improvement over the current tariff

⁴⁶ *Id.* at 17.

⁴⁷ CAISO states that this report is *available at* <http://www.aiso.com/Documents/Monthly%20market%20performance%202013>. *Id.* at 18, n.19.

⁴⁸ *Id.* at 17-19.

because they create appropriate incentives for economic bidding, particularly for variable energy resources, and enhance downward dispatch flexibility to address oversupply conditions. Further, we find that CAISO's proposal should help reduce incentives to deviate from CAISO dispatch instructions in real-time and help deter adverse market behavior that could result in artificially inflated bid cost recovery or residual imbalance energy payments. We will also grant CAISO's request for waiver to allow the proposed tariff revisions to become effective on April 1, 2014, more than 120 days after filing, because CAISO has shown that it needs this additional time to implement the necessary software modifications.

34. We find that lowering the bid floor from negative \$30/MWh to negative \$150/MWh should facilitate increased real-time economic bidding by variable energy resources because the lower bid floor should cover the opportunity costs of not producing for many variable energy resources. A deeper pool of economic decremental bids should allow CAISO to rely more on market-based curtailment in periods of over-generation.

35. We also find that separating bid cost recovery for the day-ahead and real-time markets should encourage more real-time economic bidding by all resources. The proposed bid cost recovery settlement rules can, in some cases, encourage resources with a day-ahead schedule to submit incremental or decremental energy bids in the real-time market. Under the current rule, any profits in one market are netted against the shortfalls in the other market before any bid cost recovery payments are determined. In contrast, under the revisions proposed here, a resource would keep any profits earned in either the day-ahead or real-time market, regardless of what happened in the other market. Thus, we find that the separation of day-ahead and real-time bid cost recovery should increase economic incentives for resources to bid into the real-time market, which will allow CAISO to more efficiently and economically dispatch resources to reliably manage the grid.

36. We will also accept the bid cost recovery calculation revisions related to short-start units and multi-stage generators, as well as the revisions associated with application of the day-ahead metered energy adjustment factor. We find that, in the context of separate day-ahead and real-time bid cost recovery, the existing tariff provisions may create perverse incentives for deviating from CAISO instructions to increase or decrease output in real-time. We find that the proposed revisions reduce these incentives while also encouraging resources to submit economic bids in real-time, which should improve overall market efficiency.

37. We also agree with CAISO that the real-time performance metric is superior to the existing real-time metered energy adjustment factor. The real-time performance metric, in addition to accounting for delivered energy, includes safeguards to reduce the costs considered in bid cost recovery if a resource fails to adhere to CAISO's instructions. We find that these revisions are reasonable because they will ensure that CAISO pays bid cost recovery only for the costs associated with energy dispatched by CAISO in the real-

time market that a resource delivers. We also find that the rules for calculating bid cost recovery payments for multi-stage generators are just and reasonable measures that eliminate the potential for double counting of costs that could otherwise occur when day-ahead and real-time bid cost recovery are calculated separately.

38. While we support CAISO's inclusion of safeguards to protect against new opportunities for adverse market behavior, we find that CAISO has not justified its request for authority to adjust bid cost recovery payments under a "catch-all" provision. The stated purpose of the proposed "catch-all" provision is to address unanticipated scenarios that are not included in the extensive set of settlement rules in the tariff.⁴⁹ Thus, the "catch-all" provision could permit CAISO to charge rates that are not included in the tariff. We find that this type of unauthorized, broad settlement adjustment authority provides CAISO with too much discretion to perform resettlements without transparent calculation methodologies and may erode market participants' confidence in market solutions. Thus, we reject CAISO's proposal to include the "catch-all" provision and direct CAISO to submit a compliance filing that removes the "catch-all" language from the relevant tariff provisions for both the day-ahead metered energy adjustment factor and real-time performance metric within 30 days of the date of this order.

39. We find that CAISO has demonstrated the potential for resources to take advantage of the separation of day-ahead and real-time bid cost recovery to expand bid cost recovery and residual imbalance energy payments. Thus, we agree with CAISO regarding the need for a measure that reduces opportunities for resources to earn inflated payments by persistently deviating from CAISO dispatch instructions. CAISO's analysis indicates that 97.5 percent of the time resources will not have deviations that fail the persistent deviation metric.⁵⁰ This analysis suggests that resources will not have four or more flagged intervals unless the deviations are caused by circumstances beyond normal operational deviations. Further, the Department of Market Monitoring's analysis of the proposed four-interval threshold demonstrates that the persistent deviation metric should be effective to curb the potential abuses of the settlement rules.⁵¹ Thus, we find the four-interval threshold to be an appropriate measure of deviations beyond those that are inadvertent or unavoidable. Accordingly, we will accept this aspect of CAISO's proposal as a just and reasonable measure to discourage persistent deviations without being overly punitive.

⁴⁹ CAISO Proposal at 33, 35; CAISO Tariff, Proposed §§ 11.8.2.5, 11.8.4.4.

⁵⁰ CAISO Proposal at 48.

⁵¹ *Id.*

40. In light of the other revisions proposed in this filing, and in order to ensure that CAISO's stated objectives are achieved, we also find the revisions to align exceptional dispatch settlements with the settlement of residual imbalance energy associated with the exceptional dispatch, revisions pertaining to settlement of ramping energy up to and down from temporary increases of a resource's minimum load, and proposed limitation on minimum load cost recovery for resources that attempt to avoid CAISO shut-down instructions to be just and reasonable. These revisions are consistent with the principle that resources should only receive bid cost recovery for energy delivered in response to a CAISO dispatch instruction and should also reduce incentives for resources to engage in adverse market behavior in order to inflate bid cost recovery or residual imbalance energy payments.

41. We note CAISO's acknowledgment and Six Cities' concern that separate bid cost recovery for the day-ahead and real-time markets may increase the overall cost of bid cost recovery payments to market participants, at least in the short-run before resources respond to the incentive to increase participation in the real-time market. While we find that CAISO's proposed bid cost recovery revisions are generally just and reasonable, we also find that Six Cities' concern is not without merit. To address the potential increase in overall bid cost recovery payments, we direct CAISO to improve the transparency of bid cost recovery uplift payments by revising its current monthly reports to track the impact of these revisions and including this information as a standing item on the agenda for the Market Performance and Planning Forum stakeholder meetings, consistent with the actions suggested by CAISO in its answer.⁵²

42. CAISO currently reports aggregated bid cost recovery payment amounts for each market process that resulted in the need for an uplift payment (for example, residual unit commitment) and for each type of cost a generator is compensated for (for example, minimum load cost).⁵³ The revised report should aggregate bid cost recovery amounts by need, type of cost and area,⁵⁴ or combination of areas, where the resources receiving bid

⁵² CAISO Answer at 17-19.

⁵³ CAISO currently provides descriptions of cost types in its Market Performance Reports (*available at* <http://www.caiso.com/Documents/Monthly%20market%20performance%202013>). These descriptions include: minimum load, capacity, start-up, ancillary service, energy, and transition costs.

⁵⁴ For example, CAISO could identify resources by local reliability area.

cost recovery payments are located.⁵⁵ We find that locational information, in combination with the other data specified above, will provide the necessary transparency on the extent to which the revisions proposed here increase market efficiency due to changes in real-time bidding behavior. This information will assist CAISO and its stakeholders in monitoring the implementation of the proposed revisions and verifying that changes in bidding behavior and price formation offset any potential increase in overall bid cost recovery payments. However, we recognize that confidentiality must be maintained and that reporting timelines should be based on the availability of accurate data. Therefore, we direct CAISO to submit a compliance filing, within 30 days of the date of this order, that describes in detail how CAISO proposes to revise its monthly reports. CAISO's proposal should address confidentiality and reporting timelines as well as the specific data to be reported. Consistent with CAISO's current practice, the revised monthly report would not be filed with the Commission.

43. We reject the requests by Calpine and WPTF to require CAISO to perform more granular netting of costs and revenues in the real-time market. It is well established that, pursuant to section 205 of the FPA, the Commission limits its evaluation of a utility's proposed tariff revisions to an inquiry into "whether the rates proposed by a utility are reasonable – and does not extend to determining whether a proposed rate schedule is more or less reasonable than alternative rate designs."⁵⁶ The proposed revisions "need not be the only reasonable methodology."⁵⁷ We find that CAISO has demonstrated that eliminating netting across the day-ahead and real-time markets should encourage more resources to submit real-time economic bids. Also, we find that the instant revisions are an improvement over the current bid cost recovery rules that should help to better align bid cost recovery with actual costs. Thus, we continue to find that netting costs and revenues over the full 24-hour period in the real-time market is a "reasonable mechanism for cost recovery."⁵⁸

44. Because we have found that CAISO's proposal to separate day-ahead and real-time bid cost recovery to be just and reasonable, the burden is on the protestors to show

⁵⁵ As an example, a line in the revised report would show an aggregated dollar amount for all bid cost recovery payments on a given day for each market (day-ahead, residual unit commitment, real-time), for each type of cost (i.e., energy, ancillary services, minimum load), in a particular area.

⁵⁶ *E.g.*, *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984).

⁵⁷ *E.g.*, *Oxy USA v. FERC*, 64 F.3d 679, 692 (D.C. Cir. 1995).

⁵⁸ September 2006 Order, 116 FERC ¶ 61,274, at P 504.

that 24-hour netting in real-time has become unjust and unreasonable. We find that, while Calpine and WPTF have demonstrated that resources may earn higher bid cost recovery under a more granular approach, they have not shown that compensation under CAISO's proposed revisions will be unjust or unreasonable. We disagree with Calpine's assertion that here, CAISO must expressly justify the use of a 24-hour netting period for application in the real-time market alone. Although CAISO will be calculating bid cost recovery for real-time independently from the day-ahead, these revisions do not fundamentally change the design of CAISO's bid cost recovery mechanism. Thus, based on CAISO's explanation of the shortcomings of the existing settlement rules and its demonstration that the revised rules will help to achieve the stated objective of increasing real-time bidding, we find that CAISO's proffered justification for 24-hour netting in real-time is sufficient.

45. We reject WPTF's request to direct CAISO to allow daily bidding of start-up and minimum load costs under the registered cost option as beyond the scope of this proceeding. In the instant filing, CAISO has not proposed revisions to the registered cost provisions of its tariff. Further, WPTF has not shown that the existing provisions are unjust or unreasonable.

46. Finally, we reject EPSA and Exelon's request to establish a technical conference on the effects of negative pricing and non-market revenues on price formation in all Commission-jurisdictional markets as beyond the scope of this proceeding. While CAISO's filing may generate discussion concerning efficient market pricing and the integration of variable energy resources, this proceeding is limited to consideration of the specific tariff revisions proposed by CAISO which, as discussed above, we conditionally accept. Nevertheless, we encourage CAISO to continue working with its stakeholders to ensure that its market provides accurate and efficient price signals as the participation of variable energy resources in its markets increases.

The Commission orders:

(A) CAISO's proposed tariff revisions are hereby conditionally accepted, subject to modification, as discussed in the body of this order.

(B) The Commission hereby grants waiver of the 120-day notice requirement to permit the proposed tariff revisions to become effective on April 1, 2014, as requested by CAISO.

(C) CAISO is hereby directed to submit a compliance filing within 30 days of the date of this order, as discussed in the body of this order.

(D) CAISO is hereby directed to monitor and disclose information about the effects of the instant bid cost recovery settlement revisions, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.