UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	))	**Docket No. ER12-50-000**

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 (CAISO)[1] hereby files its answer to the motions to intervene and comments submitted in this proceeding in response to the CAISO's submittal on October 7, 2011, of an amendment to the CAISO tariff to implement the flexible ramping constraint in its real-time market processes and to provide just and reasonable compensation to resources that resolve the flexible ramping constraint.[2] The CAISO also hereby submits a motion to file an answer and its answer to the protests submitted in this proceeding by Calpine Corporation, Western Power Trading Forum (WPTF), GenOn Parties; NRG Companies; the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, CA (Six Cities).[3]

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[1] The ISO is also sometimes referred to as the CAISO. Capitalized terms not otherwise defined herein have the meanings set forth in Appendix A to the ISO tariff. Unless otherwise expressly stated, references in this filing to the "tariff amendment" are references to the tariff amendment submitted in the instant proceeding (Docket No. ER12-50).

[2] The following entities filed motions to intervene and/or comments in this proceeding: NextEra Energy Resources, LLC; Modesto Irrigation District, California Department of Water Resources State Water Project (SWP); Pacific Gas and Electric Company; Southern California Edison Company (SCE); City of Santa Clara, California and the M-S-R Public Power Agency; Powerex Corp.; Northern California Power Agency (NCPA); and J.P. Morgan Ventures Energy Corporation.

[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 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

WPTF, NRG and GenOn oppose the proposed flexible ramping constraint methodology and compensation requesting that the Commission instead require the CAISO to develop a bid-based based market product to meet the operational needs identified in this proceeding. In contrast, representatives of load and exports support the adoption of the constraint but are generally concerned with the CAISO's proposed allocation of costs associated with the enforcement of the constraint.[4]

The Commission should accept the proposed flexible ramping constraint and associated compensation as filed. The flexible ramping constraint is necessary to allow the CAISO to improve its management of the flexible ramping capacity being offered in any given interval of the real-time market. By enforcing the proposed the constraint, the various market runs that will optimize the commitment and dispatch of resources in a manner that makes full and better use of capacity made available to the CAISO markets. The constraint will reduce the current costs associated with dealing with the ramping shortages in the real-time market and provides a more just and reasonable method for allocating such risks and costs. Indeed, no party objects the adoption of the constraint itself and no party challenges whether the CAISO's need to address the operational and reliability issues resulting from the lack of consideration for needed flexible capacity. For the reasons explained below, the Commission should accept the tariff amendment as submitted.

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in the case. *See, e.g.*, *Xcel Energy Services, Inc.*, 124 FERC ¶ 61,011, P 20 (2008); *California Independent System Operator Corp.*, 132 FERC ¶ 61,023, P 16 (2010); *Equitrans, L.P.*, 134 FERC ¶ 61,250, P 6 (2011).

[4] SCE, NCPA, SWP, and Powerex.

I. Answer

A. The Flexible Ramping Constraint is an Interim Measure to Enable the CAISO to Address Current Operational Concerns while the CAISO Develops a Market-Based Biddable Product.

Some commenters and protestors request that the Commission require that the CAISO implement the flexible ramping constraint only as an interim measure with a definite, scheduled transition to implementation of bid-based, market mechanisms to procure needed flexible ramping capacity.[5] Protestors request a bid-based approach to procuring the ramping capacity sought after by the CAISO by enforcing the ramping constraint. WPTF requests that if the Commission accepts the CAISO's proposed tariff amendment in the instant filing that the Commission also requires that the CAISO sunset the use of the flexible ramping constraint by spring 2012.[6]

The CAISO agrees with commentators and protestors that the flexible ramping constraint is not a bid-based product. The CAISO also agrees that it should be an interim measure to enable the CAISO to more optimally make use of resources bid energy and ancillary services into the CAISO market in a way that ensures there is sufficient ramping capacity in the real-time dispatch to follow load reliably and efficiently. Contrary to suggestions by certain protestors, all of the CAISO's representations in the stakeholder process and in its transmittal letter supporting the instant filing clearly represent the flexible ramping constraint consistent with these statements. The CAISO has not made any false representations regarding the nature of the constraint.

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5 *See* Calpine Protest, WPTF Protest, and NRG Protest.

6 WPTF Protest at p. 4.

The CAISO also clearly stipulated that the constraint is an interim measure that it expects to eliminate once the CAISO has developed alternative market-based products to procure the needed flexible ramping capacity. In its transmittal letter the CAISO described the flexible ramping constraint as a constraint to be included in its existing optimization of market runs preceding the five minute real-time market run to ensure that there is sufficient capacity to be provided by committed flexible resources not designated to provide regulation or contingency reserves (spinning and non-spinning reserves) and whose upward capability is committed to cover variability and uncertainty in load forecast needs.[7] The CAISO further explained that the capacity will then be available for five minute dispatch instructions from the real-time dispatch, and if dispatched above minimum load will be eligible to set real-time locational marginal prices subject to other eligibility provisions established in the CAISO tariff section 34.19.2.3.

An important distinction between the implementation of the constraint and a bid-based market mechanism for procuring flexible capacity is that in using the constraint the CAISO is not procuring any additional capacity and is instead making better use of the capacity already made available by the bid-in fleet of resources to its real-time market. The constraint essentially allows the CAISO to identify the resources that have already offered their available flexible capacity to ensure that the more flexible upward ramping capacity of resources already

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[7] Transmittal Letter at p. 10.

making such capacity available and already putting it online is actually available in the five-minute market.

Through this mechanism there is no attempt by the CAISO to procure and, as suggested by some protestors, not compensate for the procured capacity. The simple constraint mechanism only allows the CAISO the ability to better manage the flexibility of the resources already bid-into the CAISO real-time market. Indeed, the mechanism does fall short of the benefits a more robust bid-based product would provide both the CAISO and market participants. However, given the operational constraints the CAISO has experienced, the constraint is essential to allow the CAISO to begin to better optimize the capacity made available to the CAISO in its real-time market. Delaying the implementation of the flexible ramping constraint until the CAISO develop a more market-based approach is unnecessary in light of the CAISO's proposed just and reasonable compensation for resources contributing to relieving the constraint as described in the transmittal letter and further described below. The absence of the constraint will continue to put pressure on the real-time five minute market to find optimal solutions to meet forecast of CAISO load without sufficient resources being committed to meet the variability and uncertainty in load, unnecessarily driving up overall costs of serving load on the system ignoring the capacity resources have already offered in the five minute market. While this mechanism is not as ideal as a bid-based market mechanism that allows the CAISO to actually procure flexible capacity and compensate for the actual solicitation and procurement of such capacity, it is an important and necessary interim step towards building a more robust market.

Indeed, contrary to assertions by protestors, the CAISO has already commenced and has issued a detailed road map reflecting its commitment to the completion of a stakeholder process designed specifically to develop and implement an actual market based product.[8] On August 25, 2011, in approving the inclusion of the flexible ramping constraint and the CAISO board of governors instructed CAISO staff to commence the process to develop such a product and make that a top priority.[9] The CAISO has already made the flexible ramping product stakeholder effort a top priority in its efforts to evaluate and consider market design changes necessary to accommodate the changing grid needs. There is no need for the Commission to order such an effort or to condition it's approval of the flexible ramping constraint on that process taking place.

The Commission should also reject WPTF's recommendation that the flexible ramping constraint only be retained until spring of 2012 if approved. This is an unreasonable and unrealistic request. The flexible ramping constraint should be left in place until the CAISO and stakeholders have had an opportunity to develop and implement the market based approach. This effort will require some time and it is impossible for the CAISO and its stakeholders to complete

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[8] *See* http://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleRampingProduct.aspx.

[9] See Transmittal Letter at p. 10 and fn 11 stating that the requirement to provide a progress report by February 2012 is stated in the Board of Governors' motion approving the proposal. The motion is available at: http://www.caiso.com/Documents/110825DecisiononFlexibleRampingConstraintCompensationMotion.pdf.

this task by 2012. Instead, the Commission should approve the proposed flexible ramping constraint and the proposed compensation proposed in this proceeding and allow the CAISO and stakeholders to concentrate on developing the more robust market based approached.

B. Compensation based on the Opportunity Cost of the Marginal Resource Identified for the Flexible Ramping Capacity is Just and Reasonable, and Non-Discriminatory.

The CAISO proposes to compensate all generation and demand resources, that are identified as having resolved the applicable flexible ramping constraint in any given market interval at the shadow price of the constraint for the applicable interval. The CAISO explains in its transmittal letter that the flexible ramping constraint shadow price is the resource-specific opportunity cost of the marginal resource that contributed to relieving the constraint. The CAISO and the bulk of stakeholders concluded that the payment of opportunity cost for such resources is both just and reasonable because resources that are bid into the market but are identified as relieving the constraint is held back to meet the flexible constraint, and is not awarded incremental ancillary services or energy in real-time unit commitment. Such resources forego the revenue from such incremental awards and therefore are subject to an opportunity cost of the incremental profit that could have made if they were not held back by the constraint. It is just and reasonable to pay such resources for the opportunity cost resulting from the enforcement of the constraint. Thus, the CAISO proposes to pay *all units* resolving the constraint at the opportunity cost of the *marginal unit*.

WPTF and NRG suggest that the CAISO proposed compensation does not follow the principles of marginal pricing and is therefore not just and reasonable.[10] WPTF and NRG's opposition of the compensation proposal appear to do so on a fundamental misunderstanding of the CAISO proposal. Contrary to their characterization of the proposal, the proposed compensation is based on opportunity cost of the *marginal unit*. The compensation scheme in fact enables all resources that have submitted bids into the CAISO markets for energy and or ancillary services to compete equally and on an open basis.

The CAISO systems will establish the shadow price of relieving the constraint based on the marginal unit's contribution. Once established that price will be used to all resources for the capacity that has been identified as contributing to relieve the constraint. Consequently, the marginal resource sets the price as has been previously approved by the Commission.

It is important to note, however, that under the proposed flexible ramping constraint methodology, the CAISO is not accepting specific bids for the capacity contributing to relieve the constraint. The market clearing process will instead consider the bid-in costs of resources offering their capacity into the CAISO energy and ancillary services markets. It is just and reasonable under these circumstances to compensate all resources that contribute to relieving the constraint based on shadow price of the flexible ramping constraint based on the the marginal resource's contribution.

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[10] *See* WPTF Protest at pp. 5-7; NRG Protest at pp. 5-8.

WPTF asserts that the CAISO's proposal effectively seizes spinning reserves for ramping from a spinning reserve supplier, while potentially compensating the supplier at less than the price at which it offered to provide spinning reserve services.[11] This is again an incorrect characterization of the CAISO proposal. While it is correct that the constraint will effectively hold resources from being awarded operating reserves or committed for energy in preceding runs, the CAISO is proposing proper compensation for resources that are held back. Calpine provides an example that attempts to demonstrate that the CAISO's compensation does not adequately compensate for resources held back from providing operating reserves.[12] Both WPTF and Calpine's comments are based on a misunderstanding of the CAISO proposal.

A discussion of Calpine's consideration of the CAISO's example explaining the opportunity-cost based proposed payment illustrates the protestors misunderstanding of the proposal. Calpine asserts that the CAISO errs in its determination of the resource-specific opportunity cost, particularly in its consideration of ancillary services. Calpine refers to the CAISO example provided to demonstrate how the opportunity could arise.[13] In that example, the resource submits a bid of $3.00 for spinning reserves and the 15-minute spinning reserves clearing price is $5.00. Calpine explains that in order to resolve the flexible ramping constraint, the resource is not awarded incremental spinning

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[11] WPTF Protest at p. 7.

[12] Calpine Protest at pp. 6-7.

[13] An important clarification is that the ISO example was not intended to illustrate the resource-specific payment. Because the ISO proposal is based on marginal pricing principle, the only time the shadow price is the resource-specific opportunity cost is if the resource is the marginal resource resolving the constraint.

reserves and points to the CAISO comment that "the resource incurred an opportunity cost of $2.00."[14] The CAISO explained in its filing that the $2.00 would be the basis for setting the shadow price, and the level of compensation for all resources.

Calpine creates the impression that the forgone profit is the full $5.00 and not the $2.00 above and beyond the resource's bid-in costs. In doing so, Calpine inappropriately exaggerates the resource's forgone opportunity for obtaining an alternative source of revenue, which is simply the profit the resource would have made if the resource was awarded the operating reserves.

In very simple terms, the $3.00 is the bid in cost the resource is asserting reflects their cost of providing the resource. If the resource is not awarded ancillary services, the resource does not incur such costs. This is not an opportunity cost and cannot be accounted as such. Calpine itself states that "when the flexible ramping constraint binds in the ancillary services markets, the generator is deprived of its profits otherwise earned from the award." Calpine then asserts that the "foregone profits represent the resource's true opportunity costs." Consistent with this characterization of the opportunity cost, the forgone profit otherwise earned from the award is simply the $2.00. If the $3.00 is a cost, and, therefore, cannot be characterized as a profit. To assert that the resource expected to "earn" their costs if not awarded ancillary services is simply contrary to accounting principles of costs and profit.

[14] Calpine completes this statement with the qualification "if that resource were the marginal unit resolving the constraint." This is a mischaracterization of the proposal. As explained above, the ISO's proposal is based on marginal pricing principles.

Calpine then asserts that viewing the $3.00 as purely capacity-related cost, the CAISO's proposed compensation for the flexible ramping product does not adequately compensate the resource if it is providing flexible ramping capacity and should therefore be compensated for such costs. Calpine fails to explain, however, that if the resource is identified as relieving the constraint it will have already been identified for dispatch and has been put on line through one of the CAISO's commitment processes. As such the resource will be fully compensated for its bid in costs and fixed costs through the CAISO's locational marginal pricing based markets and the bid cost recovery process. The only additional payment that is warranted for resources identified as participating in relieving the flexible ramping constraint is the opportunity cost of the energy or ancillary services which it was not awarded. The $2.00 identified in the CAISO example repeated by Calpine reflects the opportunity cost of being held for its flexibility.

If one was to concede to Calpine's assertions, one would have to at the very least accept the premise that the resource bid-in three dollars worth of costs it would not incur even if it was awarded ancillary services. This would lead to the conclusion that resources are bidding into the ancillary services market at way above their costs and that the full five dollars earned if awarded ancillary services is pure profit.

WPTF also argues that the proposed compensation scheme would discriminate among suppliers providing "almost exactly the same product paying one for spinning reserves and the other only opportunity-based pricing for ramping."[15] Again, WPTF fails to appreciate the differences in the services being provided under operating reserves and that would be provided if participating in relieving the flexible ramping constraint. As discussed below, operating reserves serve an entirely different purpose. Therefore, given that resources are serving different market functions, it is just and reasonable to provide different compensation for such resources. If the CAISO were follow WPTF's logic, there would be no need for developing a bid-based flexible ramping product, which WPTF also asks the Commission to compel the CAISO to develop.

The Six Cities object to the CAISO's refusal to not rescind payments associated with the constraint in the event that the resource does not actually perform. The CAISO did not develop such rescission of payments because it was concluded that the opportunity cost is incurred regardless of whether the resource actually provides the ramping capability in the real-time. Creating a rescission of payments mechanism would be counterintuitive to the opportunity-cost based payments. However, these issues will be discussed in greater detail as the CAISO develops a bid-based market flexible ramping product.

Similarly, Six Cities object to the CAISO's proposal not to include revenue from the flexible ramping constraint to offset bid cost payments.[16] The CAISO and stakeholders concluded that including the proposed compensation in the bid cost recovery revenue calculations to offset bid costs is not appropriate without including the opportunity cost with other bid costs. Because the opportunity cost is not bid-into the market under the current proposal, this would not be consistent

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15 *See* WPTF Protest at p. 7.

16 *See* Six Cities Protest at pp. 3-4.

with the constraint-based reliability solution proposed herein. Without an actual bid for the constraint relief it is not clear what bid costs the CAISO would consider. Therefore, the CAISO did not include this in the current proposal. Again, the CAISO will, however, consider these issues more closely in the current stakeholder process to develop the flexible ramping product.

C. Procurement of Additional Operating Reserves is Not an Effective Substitute for the Flexible Ramping Constraint or a Flexible Ramping Product

WPTF and NRG assert that the CAISO can achieve its stated operational and reliability goals by procuring additional spinning reserves to provide the ramping needs the CAISO needs.[17] WPTF and NRG assert that the CAISO's proposed enforcement of the flexible ramping constraint seizes the opportunity for resources to provide spinning reserves and rather than providing such suppliers compensation for their provision of spinning reserves, the CAISO seizes their capacity and does not compensate such resources for the capacity they provide. WPTF and NRG's assertions appear to be based on a misunderstanding of the CAISO's compensation proposal. WPTF and NRG are also mistaken in their conclusion that the CAISO's operational and reliability needs can be adequately addressed through the increased procurement of spinning reserves.

The procurement of additional spinning reserves does not address the operational and reliability issues the CAISO set out to address in this proceeding. In procuring more operating reserves, there is simply no guarantee that the

[17] *See* WPTF Protest at pp. 9-11. NRG Protest at pp. 8-11.

spinning reserves will be offered only from non-contingency-only reserves. The CAISO procures operating reserves and participants flag such resources as contingency or non-contingency only reserves. Under the current market design all of the operating reserves submitted can be contingency-only reserves. This means that the CAISO can convert such reserves into energy and make use of their ramping capacity only in the event of a contingency, which is not part of the normal market run optimization that co-optimizes the ancillary services. In essence, this renders the ramping capacity contained in the operating reserves unavailable to the CAISO markets.

NRG claims that it is the CAISO's choice to convert operating reserves to contingency only and not the market participants. Again these assertions are misplaced. Under the current market design market participants can bid in all their capacity as contingency-only operating reserves. There is no requirement that participants bid in any of their reserves as non-contingency. With contingency-only reserves, the CAISO can only make use of the available ramping capacity and convert that capacity into energy only if there is a contingency. Such reserves can only be accessed through the activation of a real-time contingency run, which is not part of the normal real-time market runs and can only be activated in the event of a contingency. Therefore, even if the CAISO were to procure additional reserves, the available ramping capacity would not be available to the CAISO in the real-time dispatch.

NRG asserts that the CAISO has full control over how much of the reserves are converted into contingency-only reserves. Again, this is a misplaced comment. Market participants can submit all of their operating reserves as contingency only in the day-ahead market. All operating reserves procured in the real-time market are contingency-only reserves.[18] NRG is correct that under the current tariff authority the CAISO can convert operating reserves to contingency-only reserves in order to protect reserves procured in the day-ahead. The CAISO has also been in the practice of converting the full capacity of a resource's awarded reserves to contingency-only in the event that the CAISO procures incremental operating reserves in the real-time from a resource that was awarded operating reserves in the day-ahead market. The CAISO has engaged in this practice in order to ensure that sufficient contingency reserves are available for specified contingency event and not prematurely dispatched for other purposes. The logic of such is based on the premise that if the CAISO is only procuring the amount of reserves necessary to meet its operational requirements. Therefore, if additional reserves are procured in the real-time market then the assumption is that we need all procured reserves to meet the real-time requirements and therefore are not able to dispatch any reserves for reason other than a contingency event.

Contrary to NRG's assertions it is not the CAISO's practice to convert all procured operating reserves to contingency-only regardless of what market participants submitted. However, the CAISO has recently announced it's intent to change this practice as it will allow the market to better co-optimize between ancillary services and energy in the real-time market. In any case, the change in

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18 *See* ISO Tariff Section 33.7.

the CAISO practices will not guarantee that the CAISO will have sufficient non-contingency-only reserves to be able to access available ramping capacity from the awarded ancillary services.

In the first instance, the CAISO market software is not configured to procure more non-contigency-only reserves over contingency-only reserves. In order to do so, the CAISO would have to adopt a constraint that forces the optimization to co-optimize in a way that forces the procurement of more non-contingency only reserves. Not only does such a change require a tariff change, but the CAISO did not pursue this option for two important reasons. First, even if the CAISO were to bifurcate the operating reserves market, there is no guarantee that market participants will bid in sufficient non-contingency only reserves. Secondly, operating reserves are by their nature a different type of service than is currently required in the CAISO real-time market. Under NERC requirements, the CAISO is required to procure a certain amount of spinning reserves that is essentially contingency-only reserves. These reserves are intended specifically as insurance that in the event of a contingency, there will be sufficient reserves in place to serve load. The ramping flexibility sought by the constraint proposed in this proceeding is not to have more such insurance in place in the event of a contingency. Rather, as discussed during the stakeholder process and the transmittal letter in support of this filing, the CAISO requires access to the ramping flexibility already offered into the CAISO market in anticipation of load variability in the real-time market. Having more operating reserves in place will not provide such flexibility unless there is a contingency in a given market run. Such events are not the norm and in any given market interval the CAISO must have the flexibility to follow load without the need to scramble to exceptionally dispatch resources or have to dispatch more expensive resources to meet load.

In any case, the CAISO need not demonstrate in this proceeding that all other possible ways of obtaining the ramping flexibility are inferior to the proposed methodology. The legal standard of review for the tariff amendment is whether the CAISO's proposal just and reasonable under Section 205 of the Federal Power Act, not whether some other alternative is also just and reasonable.[19] The CAISO recognizes that there may be better ways of accessing the ramping capacity needed. Indeed, the CAISO is pursuing more robust bid-based options. In the interim, however, the CAISO has developed a methodology that is easily implementable and provides a just and reasonable method for accessing ramping capacity already bid into the CAISO market in any given market interval. Moreover, as discussed above, the CAISO has developed and is proposing just and reasonable compensation for all resources that contribute to relieving the constraint. The Commission should allow the CAISO to proceed with this interim methodology rather than force the CAISO to continue to pursue less favorable interim approaches. Both NRG and WPTF agree that the better alternative, even than their proposed procurement of additional operating reserves, is development and adoption of a bid-based flexible ramping

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[19] *See 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*, *et al. v. FERC,* 727 F.2d 1131, 1136 (D.C. Cir.), *cert. denied*, 469 U.S. 917 (1984) (utility needs to establish that its proposed rate design is reasonable, not that it is superior to all alternatives).

product. Neither NRG or WPTF raise any legitimate reason to prevent the CAISO to adopt the proposed constraint and compensation methodology in the interim.

D. The Allocation of Costs Associated with Payment for Resources Participating in the Relief of the Constraint to Measured Demand is Just and Reasonable in the Current CAISO Markets

Some commentators and protestors assert that the CAISO's proposal to allocate costs associated with the flexible ramping constraint compensation to measured demand is not just and reasonable.[20]

The CAISO agrees with intervenors asserting that the CAISO's allocation of costs should be conducted on the basis of cost causation principles. The CAISO also agrees that with the increased presence of renewable resources variability in the real-time market will be impacted more by non-load resources. However, the CAISO's proposed flexible ramping constraint is an interim measure intended to address variability in the current CAISO markets. Under the current market, the bulk of variability on the CAISO grid continues to come from load. Therefore, it is just and reasonable to allocate costs associated with the flexible ramping constraint to load and exports (i.e., measured demand). Whether costs associated with future products designed to address future costs for the integration of renewable resources on the CAISO grid is an issue beyond the scope of this proceeding and need not be addressed here. The allocation of the flexible ramping constraint costs to measured demand is entirely

[20] See Six Cities Protest, SWP Comments, NCPA Comments and SCE Comments.

distinguishable given the difference in the source of variability today and in the future.

Contrary to SCE's assertions, the primary basis for incorporating the flexible ramping constraint at this time is not to "to address the increased uncertainty and variability associated with growing VER penetration."[21] SCE cites to the CAISO transmittal letter on pages 2-3. On those pages, the CAISO describes the sources of variability arising from a number of factors including generation variability. These variations have existed on the CAISO system always as they do in all integrated systems. However, under the current market the bulk of the variability continues to be due to variations in load.

As illustrated in the diagrams below, recent studies by the CAISO on the impact of renewable resources on the CAISO grid show that bulk of variability will be attributed to load.[22] As soon as 2012 summer, the analysis indicates that about 80% of the load following requirements are attributable to load with about 20% a result of wind and solar. The studies show that over time, the variability and uncertainty due to wind and solar is likely to increase ratio of load following requirements caused by variable resources close to 30-40% with higher penetration levels in the future.

21 SCE Comments at p. 4-6.

22 http://www.caiso.com/Documents//Integration-RenewableResources-OperationalRequirementsandGenerationFleetCapabilityAt20PercRPS.pdf

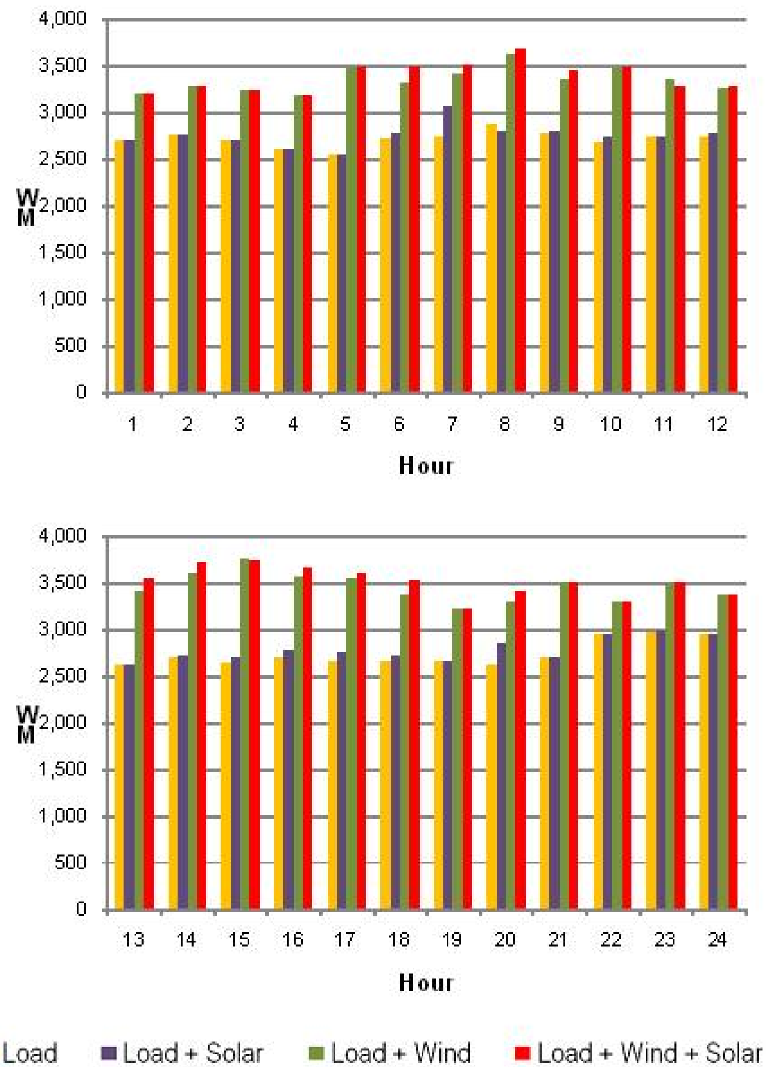

Figure 1: Comparison of Load Following Up Requirements caused by load versus wind and solar variability and uncertainty from 2012 20% RPS Study for Summer 2012.

However, by the penetration of variable energy resources increases, the CAISO will have developed its alternative flexible ramping product and will have by then retired the flexible ramping constraint. Under today's market, the CAISO already costs associated with addressing variability on the CAISO system such as ancillary services and post-day-ahead market costs to measured demand. While the CAISO recognizes that there may be other contributors to need to procure such products, the bulk is still attributable to load. Consistent with its current cost allocation schemes, the CAISO proposes to allocate costs associated with the flexible ramping constraint to measured demand, without making any conclusion as to how all such costs should be allocated in the future with the changing landscape on the CAISO grid.

SCE asks that the Commission require the CAISO to allocate flexible ramping costs to net-negative deviations of both load and generation. Under such a cost allocation, any participant that deviates from schedule (including load, conventional generation, and variable energy resources), would be charged. While the CAISO did not object to the use of net-negative deviations to allocate costs associated with variability, such an allocation would be a deviation from the CAISO's current cost allocation paradigm, which as discussed above allocates similar costs to demand. SCE fails to raise any evidence why under today's market the CAISO should single out this cost and allocate this cost to load and generation variability. The CAISO agrees with SCE, however, that as it proceeds in the development of the more permanent flexible ramping product that the CAISO should consider modifying its current cost allocation paradigm to account for cost causation principles.

In summary, under the current market environment, given that load continues to be the source of the bulk of the variability, there is no basis to break from the CAISO's current cost allocation paradigm. However, the CAISO duly notes the need to consider such issues in upcoming stakeholder processes to develop market changes that better meet the changing market's needs.

E. The CAISO Clarifies that to the Extent Participating Load Contributes to Relieving the Flexible Ramping Constraint,

Participating Load will Receive the Same Compensation as all other Contributing Resources.

SWP asks that the Commission compel the CAISO to allow participating load to provide flexible ramping if it is technically qualified and if such load so elects. While SWP states it may or may not be in a position to offer participating load for flexible ramping, it opposes the erection of barriers to any form of demand response, and opposes rules that prevent or limit market participation by resources that are technically capable. The CAISO clarifies that the CAISO intended to stipulate that participating load, just like proxy demand response resources, will be eligible to relieve the flexible ramping constraint if its technically qualified to provide such relief. If a participating load resource is identified as relieving the constraints, that resource will receive the same payment based on the shadow price of the marginal resource. The CAISO will make the appropriate tariff changes on compliance if so ordered by the Commission.

F. The Costs of The Flexible Ramping Constraint will be Transparent to all Market Participants.

The CAISO has already developed necessary mechanisms to make the implications, including costs, associated with the enforcement of the flexible ramping constraint transparent to all market participants. SWP asks that the Commission ensure that transparency is provided and WPTF asks that the CAISO memorialize the requirements in the tariff. Specifically, WPTF asks that the CAISO include a requirement in its tariff to publish information on the flexible ramping constraint or spin procurement for the relevant market processes, and a requirement similar to the reporting required by Section 34.9.4 for Exceptional Dispatches.

The CAISO always aims to provide maximum transparency to its markets subject to confidentiality restrictions, security requirements and technical limitations. In this case the CAISO has already committed and developed processes to provide the following information to all market participants: The CAISO will publish the hourly quantity and price to allow market participants to track the use and cost of the flexible ramping constraint. It is no necessary that this requirement be included in its tariff. The rule of reason requires that all rates, terms and conditions of service be included in the tariff. This information is neither a rate, term or condition of service. Nor is it related to rates, terms or conditions of service. The CAISO has found that including such requirements is in the tariff often unnecessarily limits enhancements to transparency that can be provided on a more expedited basis as improved technology becomes available. Nevertheless, the CAISO does not object to including a simple requirement that the CAISO publish information related to the costs of the constraint if so ordered by the Commission. Any further detail would unnecessarily limit any information enhancements that can be provided in the future related to this constraint.

WPTF’s request that the CAISO file regular reports with the Commission as it does for exceptional dispatch creates an unnecessary administrative burden. All market participants will have full visibility to the performance of the constraint and its associated costs. If any issues or concerns should arise, participants can either raise such issues with the CAISO and if so compelled even file a complaint with the Commission. WPTF fails to articulate what additional protections will be provided by a regular report other than burdening both the CAISO and the Commission with such reports. WPTF's request for reports is to ambigous also fails to provide any detail regarding what would actually need to be in such reports.

Nevertheless, if the Commission believes it requires such reports, the CAISO will comply such Commission orders and requests that any such reporting requirements be limited to precisely stated metrics that are already available and do not require the development of new metrics to complete the report. To that end, the CAISO can provide the Commission with quarterly reports of the hourly costs and the MWh identified as relieving the constraint.

G. Targeting Imports Does not Resolve the Reliability and Operating Issues the CAISO Seeks to Remedy.

Powerex supports the enforcement of the flexible ramping constraint but asks that the Commission require the CAISO address the additional issues created by adoption of the constraint. Powerex asserts that the enforcement of the flexible ramping constraint leads to at least two types of inappropriate import delivery reductions in CAISO's markets. The first Powerex points to is what it characterizes as implicit virtual bidding activity driven by overstated schedules in the CAISO's day-ahead or hour-ahead markets or physical import schedules reduced in the real-time that the market participant never had the generation and/or transmission to deliver in the first instance. The second is the drop in imported variable energy resources that lacked sufficient balancing reserves procured to "firm up" the schedule in the first instance. What Powerex refers to consists of essentially declines of imports at the interties that result in increased variability on the CAISO system.

The CAISO agrees that such variability adds to the uncertainty and variability that leaves the CAISO markets exposed ramping shortages in the five minute market. However, this is only one source of the pressure the CAISO faces and the CAISO has already included penalties to discourage intertie import declines.[23] Powerex does not provide any support for the potential in increase in import declines to support its assertions that the CAISO's proposed tariff amendment will result in the increase of such declines. In any case, even if they were to increase, the proper measure to discourage such behavior is to consider increased penalties for such declines. In this proceeding the CAISO seeks to address the overall reliability and operational issues created by its inability to properly account for the ramping capability available through the fleet of resources bid into each real-time market. Intertie behavior is outside the scope of this proceeding. The Commission should not allow Powerex to introduce through this proceeding new measures that have not been found yet to be necessary and do not address the issues set out in this proceeding.

Powerex also asserts that the CAISO inappropriately excluded dynamic system resources as potential participants to relieve the flexible ramping constraint. The reason for excluding such resources is that at this time the amount of flexible ramping capability is not known or at the time a dynamic system resource would need to secure transmission service for the flexible

[23] *See* ISO Tariff Section 11.31.

ramping capability. Therefore, the CAISO does not want to risk relying on flexible ramping capability that is may not be available for real-time dispatch due to the lack intertie transmission service. The CAISO does, however, believe it is appropriate to consider the terms and conditions of allowing dynamic resources to participate in the provision of the flexible ramping product the CAISO is developing in the currently pending stakeholder process.

II. Conclusion

For the reasons explained above, the Commission should accept the CAISO's October 7, 2011, tariff amendment as submitted in this proceeding without condition or modification.

Respectfully submitted,

By: ***/s/ Anna A. McKenna***

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Dated: November 14, 2011

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 Folsom, CA. this 14 day of November, 2011.

/s/ Charity N. Wilson

Charity N. Wilson