UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	))	**Docket No. ER15-2272-000**

ANSWER OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
TO COMMENTS ON PETITION FOR MARKET POWER MITIGATION AUTHORITY

The California Independent System Operator Corporation ("CAISO") answers the comments filed in response to the CAISO's July 24, 2015 petition for authorization to include in the CAISO's local market power mitigation procedures the Energy Imbalance Market (EIM) transfer constraints between the NV Energy balancing authority area and the CAISO and PacifiCorp east balancing authority areas. All of the commenters support the CAISO's petition.[1] However, two parties, Powerex and Truckee, argue that the application of the CAISO's market mitigation procedures to EIM transfer constraints will not adequately protect customers from the potential exercise of market power by NV Energy.

Powerex's and Truckee's arguments go beyond the scope of the July 24 petition because they concern the justness and reasonableness of the application of the CAISO's market power mitigation procedures in the EIM, which the Commission has already considered and addressed. Moreover, as explained below, the arguments and hypothetical examples provided by Powerex and Truckee do not present a compelling

[1] Comments were filed by Barrick Goldstrike Mines, Inc., et al., Kennecott Utah Copper LLC, Pacific Gas & Electric Company, Powerex Corporation ("Powerex"), Southern California Edison Company, and the Truckee Donner Public Utility District ("Truckee").

case for requiring additional mitigation measures relating to NV Energy's participation in the EIM. As the Commission is well aware, the CAISO's Department of Market Monitoring ("DMM") has and will continue to monitor and report on the performance of the EIM, including the potential or actual exercise of market power by any EIM participant. For these reasons, the Commission should accept the July 24 petition and reject the arguments raised by Powerex and Truckee regarding the merits of the CAISO's market mitigation procedures.

I. BACKGROUND

In its June 19, 2014 order conditionally accepting the CAISO's proposed tariff revisions to implement the EIM, the Commission approved the CAISO's proposal to apply its local market power mitigation procedures to energy bids within each EIM entity's balancing authority area, noting that the Commission had previously found those procedures to be just and reasonable.[2] The Commission also approved the CAISO's proposal to conduct EIM entity-specific evaluations as to whether to apply local market power mitigation to the applicable EIM transfer constraints, but directed the CAISO to specify that the implementation of transfer constraint mitigation would be subject to Commission review and acceptance.[3] This requirement is set forth in Section 29.39(d) of the CAISO tariff. The Commission has previously approved the application of such measures to EIM transfers between the CAISO and PacifiCorp balancing authority areas.[4]

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[2] *Cal. Indep. Sys. Operator Corp.,* 147 FERC ¶ 61,231 (2014) at P 217 ("June 19 Order").

[3] *Id*. at P 218.

[4] *Cal. Indep. Sys. Operator Corp*., 148 FERC ¶ 61,222 at P 13 (2014).

In the July 24 petition, the CAISO explained that its DMM conducted a structural competiveness assessment and found that application of market power mitigation when EIM transfer constraints into the NV Energy balancing authority area are binding is necessary to avoid the potential exercise of market power by NV Energy. The CAISO requests that this authorization be effective concurrent with the date on which the CAISO integrates the NV Energy balancing authority area into the EIM.

II. ANSWER

A. Powerex and Truckee's Arguments Regarding the Application of the CAISO's Market Power Mitigation Procedures in the EIM are Beyond the Scope of this Proceeding

Both Powerex and Truckee support the application of the local market power mitigation procedures to the EIM transfer constraints between the CAISO and PacifiCorp east balancing authority areas and NV Energy's balancing authority area, which is the only scope of this proceeding. All of the other parties providing comments on the July 24 petition also expressly support the CAISO's proposal. Powerex and Truckee, however, submitted additional comments that question the whether the application of the CAISO's market mitigation procedures to EIM transfer constraints will suffice to protect customers from the potential exercise of market power by NV Energy. Both parties urge the Commission to require the CAISO to adopt additional mitigation measures in the EIM.[5]

It would be inappropriate for the Commission to entertain these concerns in this proceeding, which go to the underlying justness and reasonableness of the CAISO's market mitigation procedures. In the June 19 Order the Commission addressed and

[5] Powerex at 4-8; Truckee at 4-5.

resolved arguments regarding the application of the CAISO's market power mitigation procedures to the EIM. Therein, the Commission explicitly found that it was just and reasonable for the CAISO to extend its real-time local market power mitigation process to the EIM footprint.[6] The only portion of the CAISO's proposal that the Commission modified was to require the CAISO to seek Commission approval before applying its market power mitigation procedures to EIM interties.[7] The sole purpose of the July 24 petition was to satisfy this obligation, which is reflected in Section 29.39(d) of the CAISO's tariff. There was no indication whatsoever in the June 19 Order that the Commission intended this process to serve as an opportunity for parties to re-open issues regarding the substantive merits of the CAISO's market power mitigation process in the EIMs. Powerex and Truckee had, and continue to have, numerous forums in which to raise these issues, including other Commission proceedings and the CAISO's stakeholder processes. The Commission should therefore reject Powerex and Truckee's comments as outside of the scope of this proceeding.

B. Powerex and Truckee Fail to Demonstrate a Need for Additional Mitigation Measures Relating to NV Energy's Pending Participation in the EIM

Powerex and Truckee both contend that under ceratin circumstances, NV Energy may have an incentive to exercise market power through physical withholding, and that the CAISO's market power mitigation procedures would do little to prevent such behavior.[8] Powerex presents a hypothetical scenario in which NV Energy could physically withhold a resource with a $30/MWh marginal cost resource in order to allow

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6 June 19 Order at PP 216-217.

7 *Id*. at P 218.

8 Powerex at 4-8; Truckee at 4-5.

a resource with a $50/MWh marginal cost to set the EIM clearing price in NV Energy's balancing authority area. Powerex's example assumes that lower cost supply from other EIM balancing authority areas is limited by EIM transfer constraints so that prices in NV Energy are set at $50/MWh, despite the fact that the CAISOs' bid mitigation procedures would apply to the $50/MWh resource. As the CAISO has pointed out, and the Commission has acknowledged on multiple occassions, the CAISO's DMM has and will continue to closely observe and report on the performance of the EIM.[9] As part of this function, the DMM will monitor for the potential or actual exercise of market power by EIM participants, including physical withholding. In fact, Truckee previously raised the issue of the potential for NV Energy to physically withhold resources in order to increase EIM prices in its protest of NV Energy's tariff amendment to facilitate its participation in the EIM.[10] In response, the Commission charcterized Truckee's concerns as "speculative" and noted that bidding into the Energy Imbalnce Market "will be subject to review and mitigation by the CAISO Department of Market Monitoring."[11] Powerex's and Truckee's concerns regarding potential physical withholding by NV Energy are equally speculative here, and are adequately addressed by DMM's ongoing market monitoring and reporting functions.

Powerex also discusses a variant of this scenario in which, rather than physically withholding the $30/MWh resource, NV Energy sells the output of the $30/MWh

[9] *See, e.g.,* June 19 Order at P 226 (noting that the CAISO's DMM would monitor the EIM and report on market trends on a quarterly basis).

[10] Protest of the Truckee Donner Public Utility District, Docket No. ER15-1196-000 (April 6, 2015) at 34-35.

[11] *Nevada Power Company,* 151 FERC ¶ 61,131 (2015) at P 178.

resource in the bilateral market at $40/MWh.[12] As Powerex correctly notes, this would be an economically rational decision for NV Energy, given bilateral market prices of $10/MWh greater than then marginal cost of the resource. This decision would not constitute withholding on the part of NV Energy, but would simply reflect NV Energy's decision to economically optimize the scheduling of its resource portfolio to meet its expected loads and bilateral market activity prior to running the EIM. In this example, it would be economically rational and efficient for NV Energy to schedule the $30/MWh resource, rather than bid it economically in the EIM when bilateral market prices were clearing at $40/MWh.

Powerex's example is also flawed because it assumes that "the anticipated imbalance energy needs in the NV Energy BAA are 50 MW."[13] In practice, all EIM entities are required to submit base schedules equal to their expected demand, so that any incremental or decremental demand met in the EIM stems primarily from real-time variations in system conditions and any economic transfers between EIM balancing authority areas. Therefore, in this example, the $50/MWh resource would only be dispatched if demand was higher than expected and exceeded base schedules submitted by the EIM Entity. On the other hand, if imbalance demand was lower than expected, prices would be set by lower priced resources that were dispatched below base schedules that were submitted by the EIM Entity. Thus, given the uncertainly of demand in the EIM, it would be economically efficient to schedule the $30/MWh resource in the bilateral market when bilateral prices were $40/MWh.

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12 Powerex at 7.

13 Powerex at 6.

In addition to being theoretically flawed, Powerex's hypothetical example is inconsistent with actual EIM market outcomes in other balancing authority areas that are similar to NV Energy in terms of structural market power. In the scenario described by Powerex, EIM prices are $50/MWh compared to bilateral market prices of $40/MWh. Powerex contends that the incentives associated with this price differential "will drive prices above levels that would persist in a competitive environment."[14] In practice, however, EIM prices resulting from the bid prices of the fleet of resources that have been offered into the EIM have tended to be approximately equal to or lower than bilateral market price indices used to set rates for imbalance energy in these balancing authority areas prior to EIM.[15] Powerex provides no evidence that NV Energy's participation in the EIM would be likely to run counter to this trend.

Powerex also suggests that other measures should be implemented by the CAISO to mitigate the potential for market power. Specifically, Powerex suggests that during periods when constraints limit EIM transfers from other balancing authority areas, NV Energy's customers could be charged either: (1) the bilateral index-based rate currently used by NV Energy for pricing imbalance energy or (2) a mitigated price based on the average cost of NV Energy's entire generation fleet.[16] Both of these suggested alternatives are flawed because they would result in "flat" rates that do not vary by hour or reflect actual system or market conditions. This type of rate structure would

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[14] Powerex at 5-6.

[15] Report on Energy Imbalance Market Issues and Performance, Department of Market Monitoring (August 2, 2015) http://www.caiso.com/Documents/Aug21_2015_DMMReport_Performance_Issues_EIM_June2015_ER15-402.pdf

[16] Powerex at 8.

undermine one of the primary benefits of the EIM: to provide real-time time prices that reflect actual system and market conditions. Any rate based on the weighted average cost of NV Energy's fleet would tend to be systematically higher than the actual system marginal cost during some hours and systematically lower in other hours. This could create inefficient and perverse incentives for NV Energy's imbalance energy customers. Finally, warranted as noted above, bid-based prices in other EIM balancing authority areas have been approximately equal to, or lower than, similar bilateral prices used to settle imbalances prior to the implementation of the EIM. Thus, the other measure suggested by Powerex to mitigate potential market power are unneeded and would introduce potential inefficiencies into the EIM market design.

C. The CAISO Local Market Power Mitigation Procedures Will Apply when Imports From California are Limited but Resources From PacifiCorp Can Provide Imbalance Energy to the NV Energy EIM Area.

Truckee expresses a concern that PacifiCorp could have the opportunity to exercise market power in NV Energy's balancing authority area even if the Commission grants the petition and allows the CAISO to apply the local market power mitigation procedures to the EIM transfer constraints between the NV Energy balancing authority area and the CAISO and PacifiCorp east balancing authority areas.[17] Specifically, Truckee notes that if transfers from CAISO into NV Energy are limited, and NV Energy needs more power from the EIM, that power would come from PacifiCorp East. Truckee contends that if mitigation was not applied to the PacifiCorp East transfer in those cases, then PacifiCorp would have the incentive and opportunity to exercise market power in the NV Energy balancing authority area.

[17] Truckee at 4-5.

The CAISO agrees with Truckee that under this scenario, market power mitigation should be triggered for bids from resources in PacifiCorp East. Therefore, the CAISO is in the process of drafting business practice manual language regarding the application of the local market power mitigation procedures to the EIM transfer constraints between the NV Energy balancing authority area and the CAISO and PacifiCorp east balancing authority areas that vary from the current application of the local market power mitigation procedures to EIM transfers with PacifiCorp east and west. These procedures will be applied to the EIM transfer constraints between the NV Energy balancing authority area and the CAISO and PacifiCorp east balancing authority areas if the Commission grants this petition. The following explanation and examples demonstrate how the CAISO plans to implement the local market power mitigation procedure in the type of scenario presented by Truckee.

Market power mitigation in the EIM operates in a manner very similar to how it operates in any constrained area within the CAISO's balancing authority area. The congestion costs of EIM transfers are captured in the EIM balancing authority area-specific power balance constraints for each balancing authority area. These constraints are therefore reflected in the congestion component of the LMPs for resources within the EIM balancing authority areas. The implementation of local market power mitigation for the new EIM transfer constraints created by the integration of NV Energy involves testing for competitive supply against the balancing authority area-specific power balance constraints. If there is no competitive supply of counter flow to a constraint, and the constraint is associated with a positive congestion component, this will increase the non-competitive congestion component of the LMPs for resources within that balancing authority area. As with resources in the CAISO's balancing authority area, resources in an EIM balancing authority area with net positive congestion components from non-competitive constraints are subject to mitigation. This implementation of the CAISO's market power mitigation procedures will ensure that mitigation is applied to each balancing authority area when appropriate, and will mitigate resources with the potential to exercise market power across multiple balancing authority areas.

The following examples show how mitigation would be triggered when PacifiCorp has the ability to set the price in NV Energy's balancing authority area. Figures 1 through 3 illustrate three possible scenarios related to Truckee's concerns. In each figure, binding EIM transfer constraints are represented by solid lines between two balancing authority areas, with an arrow showing the direction of flow. Non-binding EIM transfer constraints are represented by a dashed line.

As illustrated by these examples, whenever the EIM transfer constraint from CAISO into NV Energy is binding, two general outcomes are possible. If no other EIM transfer constraints are binding, this means that there is competitive supply available to NV Energy through PacifiCorp east from the CAISO. When other constraints are binding in the direction of PacifiCorp east, the PacifiCorp east price is separated from the system price and so the PacifiCorp balancing authority area- specific power balance constraint will bind and resources bidding into the EIM from PacifiCorp east will be subject to mitigation.

Figure 1 illustrates one of the possible scenarios relating to Truckee's concerns. In this scenario, the scheduling constraints into NV Energy from the CAISO are binding, but no other constraints are binding. Under this scenario, the price in PacifiCorp west must not be higher than the price in CAISO, otherwise the scheduling constraint from CAISO into PacifiCorp would be binding. Similarly, the price in PacifiCorp east cannot be higher than the price in PacifiCorp west, or the else the constraint into PacifiCorp east from PacifiCorp west would be binding.[18] Therefore, in this scenario, there must be competitively priced supply in PacifiCorp east that does not exceed the price in the CAISO. Otherwise, additional constraints will bind. Thus, under this scenario, PacifiCorp could not exercise structural market power in PacifiCorp east to set a high price for NV Energy.

[18] Even if the limit on the constraint from PacifiCorp west into PacifiCorp east is zero, the constraint will still bind if the price in PacifiCorp east is higher than the price in PacifiCorp west.

Figure 1. Only constraint from CAISO to NV Energy binding

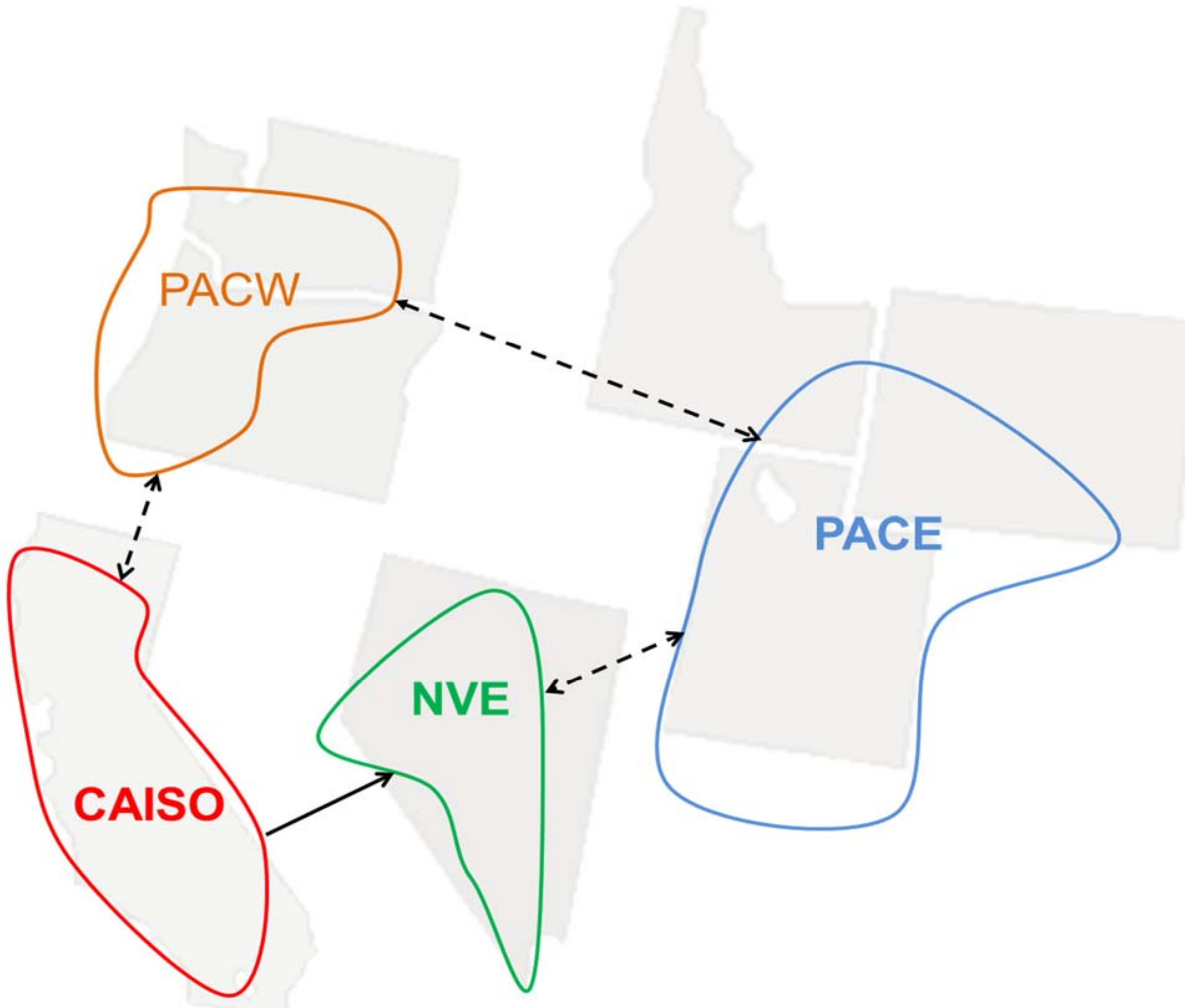


Figure 2 illustrates the second of the three possible scenarios raised by Truckee's concerns. In this scenario, the scheduling constraints into NV Energy from the CAISO are binding, and the constraint into PacifiCorp east from PacifiCorp west is also binding. This reflects a scenario in which any entity with structural market power in PacifiCorp east could potentially exercise market power in the NV Energy balancing authority area. Under this congestion scenario, the price in PacifiCorp east and NV Energy must be higher than the prices in CAISO and in PacifiCorp west. In this case, the congestion component from PacifiCorp east's balancing authority area-specific power balance constraint will be positive and PacifiCorp east will be subject to market power testing and mitigation. If the constraint from the CAISO into PacifiCorp west was also binding, the result would be the same: if the scheduling constraint into PacifiCorp east from PacifiCorp west is congested, then mitigation will apply to resources within PacifiCorp east.

Figure 3 illustrates a third possible scenario based on the concerns raised by Truckee. The scheduling constraint into NV Energy from the CAISO is binding, the constraint between PacifiCorp east and PacifiCorp west is not binding, but the constraint from the CAISO into PacifiCorp west is binding. This reflects a scenario in which any entity with structural market power in both PacifiCorp east and PacifiCorp west might seek to exercise this market power. When the constraints from the CAISO into both PacifiCorp west and NV Energy are binding, the price in CAISO is lower than the price in the other EIM areas. In this case, the prices in PacifiCorp west, PacifiCorp east, PacifiCorp east, and NV Energy are all the same, and are all higher than the price in CAISO. This means that each of these balancing authority areas will have a positive LMP congestion component on their BAA specific power balance constraints, and will be subject to testing for competitiveness and possible mitigation. Since there are currently less than four suppliers in each balancing authority area, the power balance constraints in each of these EIM balancing authority areas will be deemed noncompetitive under such circumstances. Therefore, a supplier in PacifiCorp east would not be able to exercise market power to inappropriately drive up prices in NV Energy's balancing authority area.

Figure 2. Constraint from PacifiCorp west into PacifiCorp east also binding

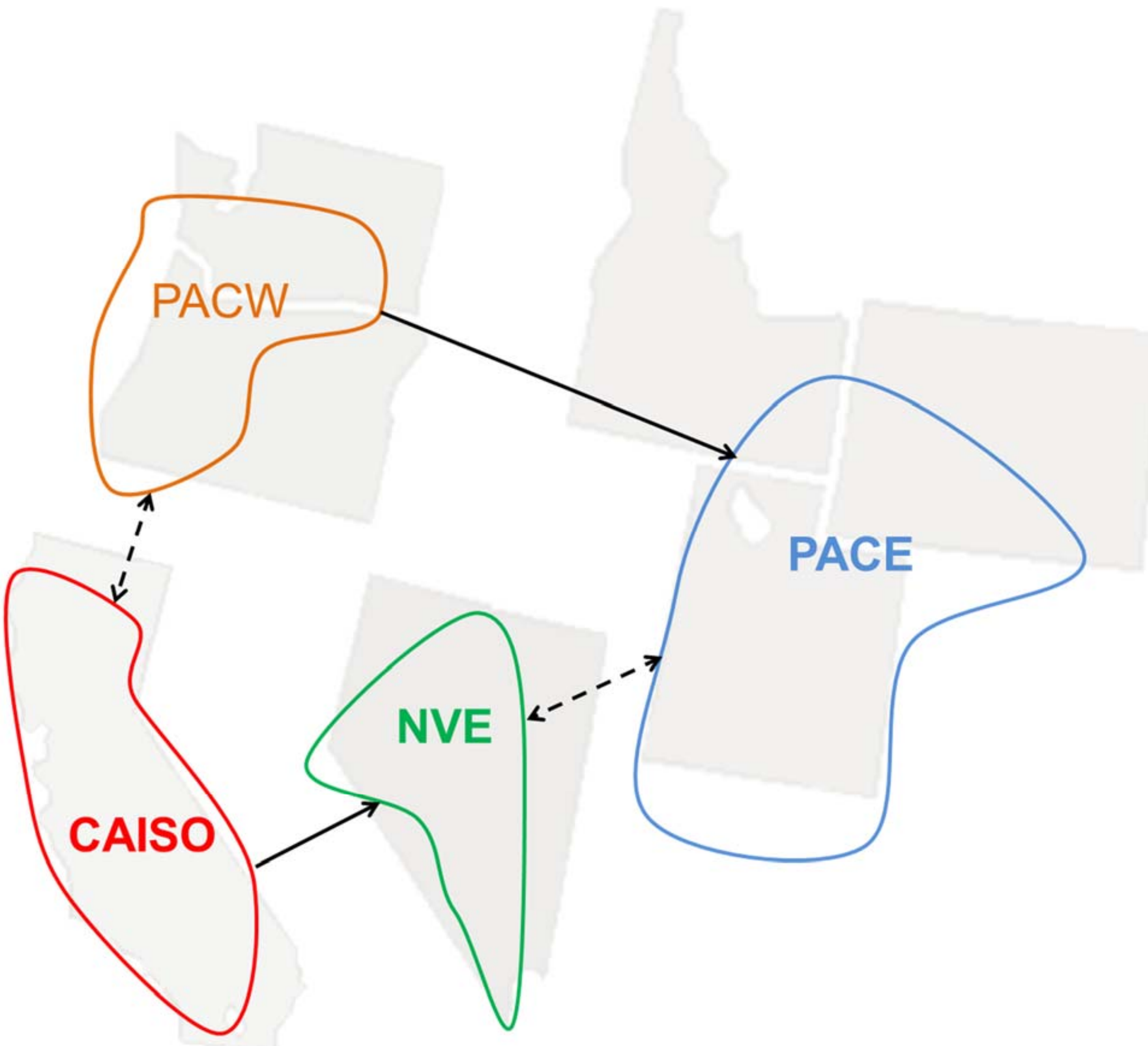
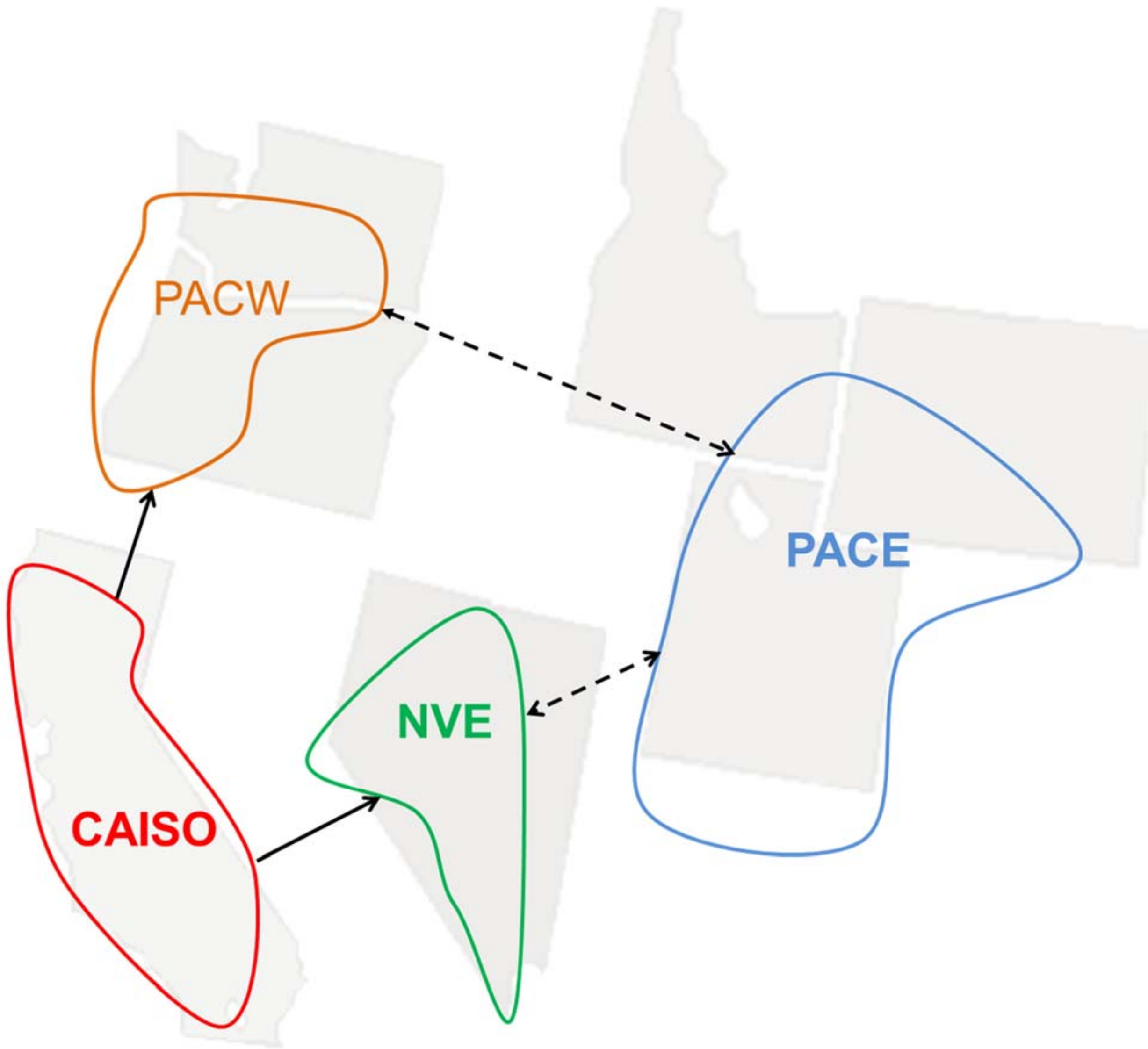


Figure 3. Constraint from CAISO into PacifiCorp west binding



Finally, with regard to concerns over the general limitations of the CAISO's local market power mitigation procedures, the CAISO notes that the CAISO and its DMM continuously monitor and evaluate the performance of its markets, including the local market power mitigation. If any issues should arise, the CAISO and DMM will take all appropriate actions to ensure market power in its markets is mitigated effectively.

III. CONCLUSION

For the reasons stated above, the CAISO requests that the Commission accept the July 24 petition and reject the comments of Powerex and Truckee regarding the merits of the CAISO's market mitigation procedures as applied to the EIM.

Respectfully submitted,

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

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Dated: August 28, 2015

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service list in the captioned 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 28th day of August 2015.

/s/ Anna Pascuzzo
Anna Pascuzzo