



Stakeholder Comments Template

System Market Power Mitigation

This template has been created for submission of stakeholder comments on the Draft Final Proposal for the System Market Power Mitigation initiative. The paper, stakeholder meeting presentation, and all information related to this initiative is located on the [initiative webpage](#).

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business **July 14, 2020**.

Submitted by	Organization	Date Submitted
<i>Wei Zhou (wei.zhou@sce.com)</i>	<i>Southern California Edison</i>	<i>July 14, 2020</i>

Please provide your organization's general comments on the following issues and answers to specific requests.

Summary of SCE Comments

In summary, SCE offers the following comments for the CAISO consideration:

- The CAISO should provide data on the mitigation frequency under the CAISO Proposal and compare it to the number of structurally uncompetitive hours;
- In order for the proposal to be a more meaningful and effective solution, the fringe supply in the proposed pivotal supplier test should include only competitive offers with the offer price at or below the Competitive LMP. The CAISO should apply this modification to the proposal and compare the resultant mitigation frequency to the number of structurally uncompetitive hours;
- It is problematic to include the bilateral hub prices plus 10 percent as a mitigation trigger or a component in deriving the Competitive LMP. The conversion of block prices to hourly price introduces additional issues;
- The system market power test should be triggered when the entire market clears at the offer cap;
- The proposal should include the demand plus 10 percent when performing the residual supplier test;
- Other issues include the proposed mitigation applicable to only the CAISO internal pivotal resources, and the use of the highest gas price in the EIM region in determining the estimated cost of a peaker; and
- The CAISO should start the discussion on system market power mitigation in the day-ahead market.

1. Pivotal Supplier Test Trigger

Please provide your organization's specific feedback on the ISO's Pivotal Supplier Test Trigger proposal, as described within the draft final proposal, which includes several criteria to only perform the three pivotal supplier test when there is a potential for system-level market power.

- 1) The CAISO should provide data on the mitigation frequency under the CAISO Proposal, as well as the mitigation frequency when the fringe supply only includes competitive offers. The information should then be compared to the number of structurally uncompetitive hours identified by the DMM¹.

To evaluate whether the CAISO Proposal provides a meaningful solution in order to address system market power, the CAISO should provide an estimate of how often the proposed mitigation trigger criteria, broken down by each of the criteria, would be triggered and, an estimate on how often bid mitigation would actually occur (i.e., RSI3 <1.0). This information, i.e., the frequency of bid mitigation occurrence under the Proposal (not just the frequency of mitigation test trigger), can then be compared to the number of structurally non-competitive hours that were previously identified.

During the June 24, 2020 stakeholder call, the CAISO staff stated that initial data showed that *two out of the four* proposed triggers would trigger in 0.5% - 1% of all intervals in the real-time market (i.e., roughly 40 – 90 hours in a year). The frequency when all four triggers are considered was not provided but will be lower than 0.5% - 1%. This indicates that very likely the proposed triggers would lead to an extremely low frequency that the mitigation test will trigger, and an even lower frequency when there will be actual bid mitigation. This is because the bid mitigation will occur only if the pivotal supplier test is triggered and the pivotal supplier test fails (i.e. RSI3 <1). The CAISO should provide an estimate of how often the proposed pivotal supplier test will fail.

Under the CAISO Proposal, all non-CAISO-pivotal resources are treated as fringe supply, consisting of import offers, EIM resources, EIM transfers, and a portion of the output of the resources controlled by the three largest pivotal supplies internal to the CAISO BAA². Under the CAISO Proposal, all these resources are included as fringe supply absent a test of whether their offers are competitive. Since system market power mitigation is designed to ensure competitive market clearing prices, it is unreasonable to include all non-CAISO-pivotal resources as fringe supply absent a competitiveness test. In addition, the size of these resources can be comparable to the three largest pivotal suppliers internal to the CAISO BAA, which makes the problematic assumption that all fringe supply is competitive³.

¹ The residual supply index with the three largest suppliers removed (RSI3) was less than one during 145 hours in 2019, 336 hours in 2018, and 197 hours in 2017. Source: the DMM 2019 Annual Report on Market Issues and Performance, at 176, available at <http://www.caiso.com/Documents/2019AnnualReportonMarketIssuesandPerformance.pdf>.

² The CAISO Proposal, at 41-43.

³ For example, the 2019 CAISO BAA peak demand was 44,300MW on August 15, on which day the total *cleared* generation capacity throughout the EIM was 82,000MW (Source: CAISO OASIS//System Load and Resource Schedules//Tab "ISO_TOT_GEN_MW" in HE18).

For this reason, the CAISO should revise the Proposal so that only competitive offers are included as fringe supply in the pivotal supplier test. Accordingly, the CAISO should provide data on how often the pivotal supplier test would fail when only competitive offers are included as fringe supply and compare the information to the number of structurally uncompetitive hours. Specifically, the CAISO should include the offers that are below the proposed Competitive LMP as fringe supply. In other words, import offers, EIM resources and non-pivotal resources that bid above the Competitive LMP, should be excluded from the fringe supply in the pivotal supplier test. Such revision is necessary to ensure the CAISO Proposal represents a more meaningful and effective solution in order to address system market power.

- 2) It is problematic to include bilateral hub index prices in the proposed trigger criteria.

SCE does not support the inclusion of bilateral hub index prices as one of the proposed triggers. Because the CAISO is proposing to apply system market power mitigation only to the resources internal to the CAISO BAA that are pivotal, bilateral hub index prices are not relevant in that the default energy bids (DEB) of those resources already covers appropriate cost components of the resources, including opportunity costs for the resource. Under the CAISO Proposal, when there is system market power, the bid of such a resource would be mitigated no lower than the DEB. The inclusion of the bilateral hub index prices plus 10 percent will undermine the purpose of the bid mitigation when the bilateral hub index prices plus 10 percent do not represent a competitive market outcome, for instance, due to liquidity⁴ or other issues involved in converting the block index prices to hourly prices. In particular, it can be problematic when the transactions, which the bilateral hub index prices are derived from, are few, such as during a heat wave and tightened supply conditions. During those conditions, the market power mitigation test is the most needed.

In addition, as raised by some participants during the June 24, 2020 stakeholder call, it should be evaluated whether the use of day-ahead bilateral trading hub index prices plus 10 percent can lead to a feedback loop such that the Proposal could provide opportunities for suppliers to engage in non-competitive transactions in the day-ahead time frame to inflate the trading hub index prices, which are then used as the “competitive” price reference in the applicable real-time market when mitigation triggers.

- 3) System market power test should trigger when the CAISO and the entire market clear at the price cap.

As commented by SCE previously, the proposed trigger criteria do not seem to address the issue of system market power when the entire real-time market clears at (or close to) the price cap of \$1,000/MWh (which will become \$2,000/MWh in the

⁴ It's also possible that the expansion of the EIM market, while beneficial for the market and the region, may routinely make the bilateral hub index prices less liquid for the purpose of this initiative.

future)⁵. This is because, as currently written, the proposed trigger criteria require that the CAISO BAA marginal energy cost is *higher* than other EIM BAA marginal energy costs. To not trigger the system market power test when the CAISO and the entire market clear at the price cap, will lead to potential under-detection of system market power at the CAISO BAA. The proposed trigger criteria should be modified so that the test would trigger when the entire market clears at the price cap.

2. Pivotal Supplier Test Design

Please provide your organization's specific feedback on the ISO's proposal to use the three pivotal supplier test to determine if pivotal suppliers in the ISO Balancing Authority Area (BAA) could exercise market power in the constrained region, as described within the draft final proposal.

- 1) Under the proposed pivotal supplier test, the fringe supply should include only competitive offers that bid at or below the Competitive LMP.

The inclusion of offers, regardless of their offer price, as fringe supply can lead to non-competitive offers being counted as fringe supply, which can undermine the purpose of mitigating system market power. Under the CAISO Proposal, those offers would include all import offers subject to individual import constraints, internal offers from the resources that are not pivotal, and offers from EIM resources, EIM transfers, and a significant portion of the output from the internal resources that are pivotal. The size of these resources can be significant and likely comparable to that of the pivotal suppliers internal to the CAISO BAA. There is no assurance that these resources are competitive, or free of market power. There is no assurance either that they are more competitive than those controlled by the pivotal suppliers internal to the CAISO BAA. In addition, the proposed design of the pivotal supplier test could lead to an unrealistic amount of import offers being included as fringe supply without considering their offer prices and the simultaneous import limit (SIL)^{6,7}.

For these reasons, the CAISO should include only competitive offers as fringe supply in the pivotal supplier test. Ideally, the CAISO should test their competitiveness before including those resources as fringe supply. To the extent that such competitiveness test can be onerous, the aspect of the Competitive LMP design of the CAISO Proposal should be leveraged. Specifically, the CAISO should exclude import offers, EIM resources, and CAISO-internal resources that bid above the Competitive LMP from the fringe supply. Such modification to the CAISO Proposal is necessary to

⁵ SCE Comments on Revised Straw Proposal, 2-3, available at <http://www.caiso.com/InitiativeDocuments/SCEComments-SystemMarketPowerMitigation-RevisedStrawProposal.pdf>.

⁶ DMM, Special Report: Import Resource Adequacy (September 10, 2018) at 1-2, available at: <http://www.caiso.com/Documents/ImportResourceAdequacySpecialReport-Sept102018.pdf>.

⁷ For example, this CAISO document lists historic maximum import capability MW amounts, at 3, available at <http://www.caiso.com/InitiativeDocuments/SecondRevisedStrawProposal-MaximumImportCapabilityStabilizationandMultiYearAllocation.pdf>.

ensure the CAISO Proposal represents a more meaningful and effective solution in order to address system market power.

2) Other aspects of the proposed test design

As commented previously⁸, by limiting the three largest pivotal suppliers to those located within the CAISO BAA, the test will likely fail to identify the true three largest pivotal suppliers in the constrained region that includes the CAISO BAA. Even if the pivotal test based on the three largest pivotal suppliers internal to the CAISO BAA results in a pass, there may be instances when localized market power exists within the constrained region, which could be captured if the test were based on the three largest pivotal suppliers in the constrained sub-region.

Another issue of the proposed test design involves the fact that a significant portion of the output of the resources controlled by the three pivotal suppliers is treated as fringe supply. Such treatment could lead to a large discrepancy in the counting of the capacity of pivotal resources between this proposal and offline studies that evaluate structural competitiveness of the market, where the entire capacity of a pivotal resource is considered as pivotal. Such discrepancy can introduce a gap in the effectiveness of the Proposal in addressing structural non-competitiveness of the CAISO markets unless a system market power mitigation mechanism is implemented in the day-ahead market, as commented further at the end of these comments.

3. Determining Competitive LMP

Please provide your organization's feedback on the proposal to calculate the Competitive locational marginal price (LMP) when the ISO BAA fails the system-level market power mitigation test.

As commented above, SCE does not support the inclusion of bilateral hub index prices plus 10 percent as one of the four test trigger criteria. Similarly, for the same reasons, SCE does not support the use of bilateral hub index prices plus 10 percent in the process of deriving the Competitive LMP. Instead, the calculation of the Competitive LMP should be based on the market fundamentals. In particular, the mitigation is designed to not mitigate the offer of a resource below its Default Energy Bid (DEB), which is designed to capture the marginal cost of the resource, or the opportunity cost for use limited resources. The use of the highest bilateral hub index price plus 10 percent as a reference price for bid mitigation for resources internal to the CAISO BAA is not necessary, considering other factors also included in setting the Competitive LMP, i.e., the next highest EIM BAA price and the cost of a peaker at the highest gas price in the EIM. Such inclusion is problematic when bilateral hubs are illiquid with few transactions involved in the calculation of the hub index prices, such as during tightened supply conditions. In addition, by converting bilateral price indices, which are block prices, to hourly prices, the Proposal raises issues, for instance, with accuracy (due to the use of shaping factors and "a representative recent

⁸ Id, at 3-4.

day”⁹), and the issues of the economic meaning of the derived hourly prices (e.g., do they represent an actual, competitive hourly price?) and the applicability to the CAISO markets and the resources internal to the CAISO BAA.

Finally, since the bilateral market does not have a market power mitigation process, it is reasonable to question whether the bilateral price is in itself indicative of market power. If so, the use of the trading hub as a measure of competitive prices would fail and would establish a “competitive” price based upon non-competitive events. During the energy crisis in California, bilateral prices experienced the same price spikes as the central market clearing prices. To have used the bilateral market as an indicator of competitive conditions during these times would have likely shown that no system market power mitigation was necessary despite the conditions which are now known to have been caused by market manipulation that has resulted in numerous legal proceedings and refunds.

4. Applying mitigation to internal supply offers

Please provide your organization’s feedback on the proposal to apply the Pivotal Supplier Test to mitigate pivotal supplier resource offers within the ISO’s BAA when the pivotal supplier test fails.

- 1) At the minimum, the CAISO should ensure that the amount of the resources being subject to mitigation under the Proposal should not be less than the demand in the constrained region plus 10%.

SCE continues to be concerned that the Proposal would not mitigate all suppliers in the constrained BAA group that includes the CAISO BAA. While the CAISO staff confirmed during the June 24, 2020 stakeholder call that the amount of supply being subject to mitigation will not be lower than the amount of total demand consisting of CAISO BAA and EIM BAAs in the constrained area, there can be instances where the demand in the subsequent market runs (e.g. the fifteen-minute and five-minute markets) can vary from the demand that’s used in the market power mitigation run. At the minimum, the CAISO should ensure that the amount of supply being subject to system market power mitigation under the CAISO Proposal should equal the amount of the demand in the constrained region plus 10% to address potential load forecast differences between HASP and subsequent market runs¹⁰.

5. Additional comments

⁹ The CAISO Proposal, at 26: “the CAISO proposes to shape the published bilateral electrical trading hub prices, which represent multi-hour block sales, to hourly prices. It will adjust the index price to hourly prices by calculating a shaping factor for each hour. Using a representative recent day, the CAISO will calculate the shaping factor as the ratio of the daily average system marginal energy cost to the hourly system marginal energy cost. It will calculate this separately for peak and off-peak periods”.

¹⁰ Specifically it will be the sum of the amount of the demand in the constrained region and the net export, plus 10 percent.

Please offer any other feedback your organization would like to provide on the revised straw proposal and topics discussed during the web meeting.

As commented previously, it is important for the CAISO and stakeholders to develop robust rules to address system market power and SCE continues to urge the CAISO to start designing system market power mitigation in the day-ahead market (DAM)¹¹. System market power mitigation in the DAM will address limitations of the current Proposal of limiting the mitigation to the real-time market (RTM) and address the concerns from the MSC that an RTM mitigation cannot fully mitigate the day-ahead market. It will also address the shortcomings of treating a significant portion of the output of pivotal suppliers as competitive fringe supply under the CAISO Proposal.

¹¹ SCE Comments on Revised Straw Proposal, at 1, available at <http://www.caiso.com/InitiativeDocuments/SCEComments-SystemMarketPowerMitigation-RevisedStrawProposal.pdf>.