



California ISO
Shaping a Renewed Future

Mitigation for Exceptional Dispatch in LMPM Enhancements Phase 2

Issue Paper and Straw Proposal

July 20, 2012

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1 Introduction

Implementation of the second phase of the LMPM Enhancements market initiative will introduce a dynamic assessment of local market power and end the static approach that has historically been taken. While this feature will greatly improve the accuracy of local market power mitigation within the market dispatch, it does introduce a gap in identifying and mitigating for Exceptional Dispatch that have local market power. This proposal addresses that gap through a separate set of path designations that are based on the dynamic designations and will be used in applying mitigation to Exceptional Dispatch. The proposal also extends the methodology to providing a set of default path designations that will be used as “back-up” in the event that the dynamic competitive path assessment within the market software fails to produce a valid set of path designations.

2 Plan for Stakeholder Engagement

Item	Date
Post Issue Paper and Straw Proposal	July 20, 2012
Stakeholder Conference Call	July 27, 2012
Stakeholder Comments Due	August 3, 2012
Post Draft Final Proposal	August 23, 2012
Stakeholder Conference Call	August 30, 2012
Stakeholder Comments Due	September 18, 2012
Board Meeting	November 1-2, 2012

3 Overview of Existing Mitigation Process

Under existing rules, Exceptional Dispatch are subject to mitigation under three circumstances where the Exceptional Dispatch was made to

1. Manage an non-competitive constraint,
2. Make available stranded Ancillary Services that were procured in the day ahead, and
3. Make available stranded RUC Availability that was procured in the day ahead.

When an exceptional dispatch is made for any of these three reasons, the price applied to the calculated Exceptional Dispatch Energy (EDE) is mitigated to the better of the resource’s Default Energy Bid or the Locational Marginal Price (LMP).

Cases where the Exceptional Dispatch was made to manage an non-competitive constraint are identified by associating the constraint indicated by the CAISO Grid Operator in the Exceptional Dispatch log with the corresponding constraint on the list of competitive constraints that is produced four times each year by the Department of Market Monitoring using the static competitive path assessment methodology.

4 Impact of Dynamic Competitive Path Assessment on Mitigation for Exceptional Dispatch

As described above, the existing approach for determining when to apply mitigation to Exceptional Dispatch that were made to manage a non-competitive constraint relies on the existence of a list of competitive and non-competitive constraints. Currently a static list exists that is the outcome of a competitive path assessment performed four times each year by the Department of Market Monitoring. When LMPM Enhancements Phase 2 is implemented in the Spring of 2013 the real time market will have a dynamic competitive path assessment performed in-line with the execution of the market software and the static list will no longer be produced. This creates a gap in identifying circumstances where Exceptional Dispatch are made to manage non-competitive constraints and appropriately applying local market power mitigation.

Most Exceptional Dispatch are preemptive – made in anticipation of certain circumstances based on observed system and market conditions as opposed to reacting to an event or circumstance that has already happened. Preemptive Exceptional Dispatch made to manage transmission constraints may have the effect of relieving the anticipated congestion such that it does not materialize in the market. In this case, since the congestion was preempted by the Exceptional Dispatch there will be no dynamic competitive path assessment performed for that constraint. This introduces a potentially material under-identification of local market power since the Exceptional Dispatch was made under circumstances that presumed congestion and was limited by the set of resources that were effective in relieving the presumed congestion. These circumstances may have been non-competitive and created local market power that could not be detected by the dynamic competitive path assessment since the Exceptional Dispatch relieved the congestion in the market and precluded assessment and application of mitigation.

A separate set of path designations is required to address applying mitigation to Exceptional Dispatch made to manage non-competitive constraints. This is only an issue with Exceptional Dispatch that are made to manage transmission constraints in real time.

The dynamic competitive path assessment that identifies local market power within the execution of the market software presumes a constraint is competitive unless it fails the competitiveness test. In this case, the presumption of competitive unless proven otherwise is predicated on the availability of a positive test for competitiveness. In the case described above where the Exceptional Dispatch relieved the congestion that would have prompted the test, there is no positive test to rely on to identify non-competitive circumstances. The default of competitive is not valid unless there is a positive test to determine otherwise. The proposed methodology accounts for this gap.

5 Proposal for Triggering Mitigation of Exceptional Dispatch for Non-competitive Constraints

The ISO proposes to use historical designations produced by the dynamic competitive path assessment that is executed in the RTUC market runs to create a set of path designations that are used in applying mitigation to Exceptional Dispatch. The proposed methodology applies a threshold to both the frequency of observed congestion as well as the frequency with which the constraint is deemed competitive by the dynamic competitive path assessment. As discussed above, the underlying premise that supports a competitive default designation does not hold in the case where the path has not been sufficiently tested. In cases where there is insufficient testing (the frequency with which the path has been binding and tested does not meet the

threshold) the path will be deemed non-competitive for purposes of applying mitigation to Exceptional Dispatch.

The proposed methodology for determining path designations for purposes of applying mitigation to Exceptional Dispatch is

- A constraint that passes the following two thresholds will be deemed competitive for purposes of applying mitigation to Exceptional Dispatch:
 - Congestion Threshold: Congested in 10 hours or more in the RTUC run where the dynamic competitive path assessment is calculated, and
 - Competitive Threshold: Deemed competitive 75 percent or more of the instances where the constraint was binding and tested.
- Data for the test statistics will reflect the most recent 60 days of trade dates available at the time of testing to focus application on more seasonal conditions.
- This set of designations will be updated not less frequently than every seven days to reflect changes in system and market conditions.

The purpose of the Congestion Threshold is to ensure there are sufficient instances where the constraint has been tested in the past 60 days such that the Competitive Threshold is a more robust statistic. The purpose of the Competitive Threshold is to strike a balance between the two non-observable conditions at the time of the Exceptional Dispatch. The proposed 75 percent threshold is intended to provide allowance for some historical observations of non-competitive conditions but still ensure that the constraint has been predominantly competitive before excusing associated Exceptional Dispatch from the application of local market power mitigation.

As described above, since there may be no positive test of competitiveness in a particular interval we substitute a statistic based on historical tests (via the dynamic assessment) as a proxy for determining whether or not the constraint for which the Exceptional Dispatch was made was competitive or non-competitive at the time the dispatch was made.

An exception to the above criteria will apply to Path 15 and Path 26. These two paths will be considered competitive unless the constraint was congested in 10 or more hours in the test period and was deemed non-competitive less than 75 percent of the time. This exception allows these major inter-zonal interfaces to remain competitive even when they have not been binding in the past 60 days. If they have been binding 10 or more hours and test competitive less than 75 percent of the time then the designation used for applying mitigation to Exceptional Dispatch will be non-competitive.

6 Default Designations for Use if LMPM Process Fails

There is an additional process that requires path designations in the event they are not available from the market. Competitive path designations are required in the event of a failure of the dynamic competitive path assessment in the market software. In this instance, the next step in the mitigation process, the mitigation trigger (LMP Decomposition), may still be able to run if provided a set of path designations that can be used in the decomposition of the LMP and evaluation of need for mitigation. Further, if the entire mitigation process is unable to run the price evaluation and correction process will need a set of path designations to use in evaluating whether or not the absence of mitigation had a material impact on price.

The path designations that result from the proposed approach in Section 5 can be used as the default set of path designations effective in the event the dynamic competitive path assessment does not complete successfully in the market software. The set of default path designations

based on historical data from the real time market (used for mitigation of Exceptional Dispatch) will serve as the default designations for the HASP and RTUC runs of the mitigation process. The ISO will use the same methodology applied to historical data from the day ahead market to produce a set of default designations to be applied in the event of a failure of the dynamic competitive path assessment in the day ahead market.

7 Next Steps

The ISO plans to discuss this straw proposal with stakeholders during a conference call to be held on July 27, 2012. The ISO requests comments from stakeholders on the proposed market design described in this straw proposal. Stakeholders should submit written comments by August 3, 2012 to EDMitigation@caiso.com .