Comments on Draft Final Proposal
Aliso Canyon gas-electric coordination phase 3

Department of Market Monitoring

June 30, 2017

I. Overview

The Department of Market Monitoring (DMM) appreciates the opportunity to review and comment on the ISO's Aliso Canyon Phase 3 Initiative Draft Final Proposal. In the *Draft Final Proposal*, the ISO characterizes DMM as supportive of the proposal. While we are supportive of some of the ideas the ISO has presented, our comments on the straw proposal represented conditional support -- subject to numerous important caveats and recommendations regarding aspects of the proposal we found problematic. The draft final proposal does not address many of the key concerns from the straw proposal highlighted by DMM. These concerns would need to be addressed before DMM could support approval of this initiative by the Board or FERC.

II. Levels of gas price scalar multipliers

In our comments on the straw proposal, DMM presented an analysis of gas market outcomes so far in 2017. In our view, this analysis does not support the need for real time gas price scalars at or even near the current level. DMM has triggered the internal ISO process by which the ISO would assess whether the current level of the gas price scalars for resources supplied by the Aliso Canyon gas system are appropriate or should be reduced or set to zero. DMM's potential support for continuing the authority to use the gas price scalars is dependent on the conclusion of this process. Summaries of DMM's analysis has been presented in multiple forums, including our comments on the straw proposal in this initiative.[1]

III. Continuation and expansion of maximum gas burn nomograms

The ISO proposes to make market constraints limiting the maximum gas burn of a group of generators a permanent operational tool that can be used throughout the ISO and Energy Imbalance Market balancing areas. The draft final states that "experience over the past year has shown that the ISO has prudently used this tool and it has proven particularly effective when used."[2] The evidence and rationale for the ISO's assertion that the constraints worked well are not clear. The ISO notes that the gas nomograms were activated during one four-day period, but has not provided much analysis or explanation as to how well the constraints worked.

During the March 2017 MPPF, the ISO presented data indicating that the constraints were relaxed by the market software during many intervals over the four days when they were enforced -- meaning that the combined gas burn from the constrained resources was greater than the limit on the max gas burn constraint.[3] The ISO offers no analysis or discussion on the appropriateness of the shadow prices

[1] http://www.caiso.com/Documents/DMMComments_AlisoCanyonGas_ElectricCoordinationPhase3StrawProposal.pdf

[2] *Draft Final Proposal*, p.3

[3] http://www.caiso.com/Documents/Agenda-Presentation-MarketPerformance-PlanningForum-Mar14_2017.pdf , slides 38-39

produced when the nomograms were relaxed, the amount by which the nomograms were relaxed or the impact this had on the dispatch of other resources.

DMM believes the penalty prices currently set on these nomograms (which are in $/MMCF of gas consumption) probably need further adjustment or at least analysis. The penalty prices currently placed on these nomograms appear to be relatively low in terms of the cost of electric generation at which the nomograms would be violated instead of enforced. For example, a penalty price of $1,000/MMCF of gas consumption would seem to equate to a price of about $7.50 to $15.00/MWh for units with heat rates of 7,800 to 15,000 Btu/kWh.[4] If the incremental cost of other sources of generation outside the nomogram was higher than this ($7.50 to $15/MWh), DMM assumes the nomograms will not actually limit dispatch within the gas nomogram area.

If the ISO intends to only use the gas nomograms to enforce represent "hard" physical constraints tied to gas/electric system reliability (as it has at times indicated), then it seems the penalty prices would need to be set at a higher level reflecting the reliability risks associated with exceeding the gas limits. If the nomograms are set based on actual physical constraints and penalty prices are set high enough to ensure these are enforced, this does seems like a much better way to address actual gas/electric reliability issues than setting very high gas price scalars which are in effect under all conditions for units in the SoCal gas area (see discussion of gas price scalars in Section II and prior comments).

The fact that the gas and electric systems were operated reliably the four days these constraints were activated does not constitute proof that the constraints had a beneficial impact. [5] DMM believes a more detailed discussion and assessment of the effectiveness of the gas nomograms would be warranted before obtaining authority to expand use of these constraints to areas beyond the Aliso Canyon system.

The ISO has also stated that using the gas nomograms to accommodate physical gas limitations will be more transparent to market participants than relying on exceptional and manual dispatches. In DMM's view, this will only be true if the ISO clearly defines beforehand the situations that can lead to implementation and enforcement of a gas nomogram, and the mechanics of how the nomogram will impact dispatch and pricing.

Expanding gas nomograms beyond Aliso Canyon area

The ISO has proposed to expand its authority to use gas burn nomograms beyond the Aliso Canyon system to the rest of the ISO and all other control areas in the EIM. The *Draft Final Proposal* indicates that "the ISO believes gas system limitations may develop in other areas within its balancing authority area in the future as a result of higher levels of awareness of adverse impacts if gas storage facilities are unsafely operated."[6] In support of this, the paper cites some legislation or new regulations under consideration at the state level that could have the effect of restricting use of gas storage.

The *Draft Final Proposal* indicates that the "ISO understands from EIM stakeholders that similar constraints exist in portions of the EIM footprints." [7] However, the ISO has not cited any specific gas system limitations that the ISO might manage using gas nomograms. Given the lack of information

[4] 1 MMCF = 1,037 MMBtu; 15000 Btu/kWh = 15 MMBtu/MWh; ($1,000/1037) *15=$14.5/MWh
[5] https://www.youtube.com/watch?v=fm2W0sq9ddU
[6] *Draft Final Proposal*, p. 12
[7] *Draft Final Proposal,* p.13

about the impact and effectiveness of the Aliso Canyon gas nomograms, DMM does not support expansion of the authority to use gas nomograms until any more specific gas limitations are identified.

Before expanding nomograms to EIM areas, DMM also believes the ISO should develop more detail on how an EIM entity can decide to create and enforce a new gas nomogram. In the *Draft Final Proposal* the ISO states that guidelines will be developed *if* the authority to create and enforce these nomograms is granted. In cases such as this, such implementation details are critical to assessing the whether a policy design should be adopted. Details can be very important, especially given the lack of analysis and experience the ISO has with application of as nomograms within the Aliso Canyon system.

The ISO has stated that the nomograms are similar to the current authority each EIM entity has to issue manual dispatches, and so they do not represent a significant change. DMM believes this is an inaccurate and inappropriate comparison. DMM believes that clear guidelines for the enforcement of a new gas nomogram constraint should be determined before the policy is finalized and set for consideration by the Board.

For example, based on DMM's discussions with some EIM entities, it seems EIM entities may have a broader view of what constitutes a "physical" limitation on gas usage that should be enforced through a nomogram that extends to more contractual or commercial limitations or practices. Specifically, EIM entities may view the amount of gas that has been contracted for or scheduled by generators in the EIM balancing area (which often consist mostly or entirely of affiliates of the balancing authority are entity) as a *physical limitation*. DMM has disagreed with the ISO and some participants on how such contractual limitations or commercial practices should be viewed in terms of being binding physical limitations. DMM recommends such issues be clarified.

Considering nomogram impacts on sufficiency test for EIM areas

The ISO has proposed that an existing policy excludes determination of deliverability on the EIM sufficiency, capacity, and flexible ramping capacity tests. Because of this, the impacts of a gas nomogram would not be included in the calculation of these tests. DMM believes that this comparison is misguided. The gas nomogram, if functioning properly, is akin to an outage of some amount of capacity from the specified generators. DMM's understanding is that outages are factored into the tests. The impacts of a gas nomogram should also be factored into these important resource sufficiency tests.

Automation of gas nomogram impacts on DCPA

In the presentation on the stakeholder call, the ISO referred to inclusion of gas nomogram impacts in the automated DCPA as the 'full solution' to this issue. The ISO also said that they were committed to doing so. This is another area where DMM believes that the details of the policy need to be worked out in the development phase, and not left for an internal ISO implementation procedure. The impact of the gas nomograms is actually very similar to a generation outage – i.e. an outage that impacts multiple resources at once. In automating the impacts of this constraint on the DCPA, the ISO will essentially be assuming some degree of an outage on each of the resources subject to the constraint. DMM believes that exactly how this would be done needs to be clear to DMM and to stakeholders before anyone can form a clear opinion on whether or not to support this policy initiative.

IV. Effective period of proposed authority for gas price scalers

The *Draft Final Proposal* indicates that the ISO's authority to scale up gas prices used in mitigation of commitment costs and default energy bids "will likely no longer be needed once the ISO implements

market design changes being developed under the ISO's current Commitment Cost and Default Energy Bid Enhancements policy initiative. The CCDEBE enhancements are currently planned to be effective as of fall 2018. Consequently, the ISO proposes to extend these temporary measures until it implements these long-term changes." [8]

DMM opposes such open-ended extension of this authority for several reasons. DMM opposes some of the "enhancements" that ISO staff seems to favor in the CCDEBE initiative. This initiative is not finalized and has not yet been considered or approved by the Board or FERC. DMM also believes the approach that seems to be favored by ISO staff is not likely to be fully implemented by fall 2018. Thus, providing such open-ended extension of this authority could mean that the ISO would continue to rely on this authority for an extended period.

As previously noted, DMM does not believe that observed gas prices and conditions over the last year support extension of the current gas price scalars being used for gas-fired units in the SoCal Gas area affected by Aliso Canyon. DMM continues to recommend that the ISO adopt a more practical staged approach that starts with developing a process for updating gas prices used to mitigate commitment costs and energy bids in the real time market based on observed same day gas prices and conditions.

V. Timing of release of draft final proposal and subsequent stakeholder call

The ISO posted the Draft Final Proposal with less than 2.5 hours of working time until the June stakeholder call. During the call, the ISO received one question from the stakeholder community. DMM is concerned that the ISO's tight timeline may not allow the appropriate level of review and that low stakeholder engagement on the call may have resulted from ISO's late release of paper.

Conclusion

DMM believes that the tools designed in the Aliso response can be important in managing gas related reliability issues. However, our comments on the straw proposal identified numerous important caveats and recommendations regarding aspects of the proposal we found problematic. The draft final proposal does not address many of the key concerns from the straw proposal highlighted by DMM. These concerns would need to be addressed before DMM could support approval of this initiative by the Board or FERC.

[8] http://www.caiso.com/Documents/DraftFinalProposal-AlisoCanyonGas-ElectricCoordinationPhase3.pdf, p.17