Comments on the Gas Resource Management Issue Paper

Department of Market Monitoring

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Summary

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *Gas Resource Management Issue Paper*.[1] The purpose of the ISO's issue paper is to (1) explain the processes, tools, and mechanisms that exist in the CAISO market today as they pertain to gas resource management, (2) document key issues and discussions from the working groups, and (3) to pose targeted questions intended to solicit stakeholder feedback.

DMM understands this initiative is intended—at least in part—to facilitate accurate fuel cost representation by entities around the West that may participate in CAISO markets. Accurate accounting of gas fuel costs in dispatch and uplift decisions for resources beyond the CAISO balancing area is particularly important in the wake of the Western Energy Imbalance Market (WEIM) expansion and the implementation of the extended day-ahead market (EDAM).

DMM provides comments here on the following four issues raised in the issue paper:

- **Informing fuel procurement.** DMM supports the ISO's plan to supply participants with the D+2 advisory market (D+2) results to reduce the uncertainty around gas procurement targets for day-ahead market schedules.
- **Accommodating gas cost variation in reference levels.** DMM believes that commitment cost and default energy bids used in the market software should reflect participants' full resource costs without being unnecessarily high to drive up overall market prices. DMM recommends the ISO and stakeholders focus on ways to make more targeted changes or better utilize existing mechanisms to accommodate gas price spikes, rather than simply increasing reference levels or reasonableness thresholds.
- **Accessibility of reference level change request (RLCR) process.** DMM views the automated and manual reference level change requests as the appropriate mechanisms to handle short term gas price volatility that is not covered by normal reference levels. DMM encourages the ISO and market participants to identify potential procedural or informational improvements with the reference level change request process.
- **Gas burn limitations.** DMM agrees with the ISO that ISO policies should not disincentivize resources to follow gas pipeline instructions. DMM continues to recommend not including

[1] *Gas Resource Management Issue Paper*, California ISO, January 23, 2024: https://stakeholdercenter.caiso.com/InitiativeDocuments/Issue-Paper-Gas-Resource-Management-January-24-2025.pdf

operation flow order (OFO) costs in reference level change requests. DMM also supports the ISO working with stakeholders in the WEIM to establish clear processes for managing intra-day gas limitations that maintain incentives to procure gas at least cost.

Comments

Informing fuel procurement

Stakeholders are concerned with the need to rely on evening or intra-day gas cycles because they do not have an accurate indication of what their day-ahead schedules will be during the timely gas nomination cycle. If resources must rely on less liquid intra-day gas cycles to meet their day-ahead schedules, they may face additional financial risk.

The issue paper states that in order to address this risk, market participants want greater flexibility to reflect gas costs above index prices. This would limit exposure to the risk of having to pay more for gas than what they expected when bidding into the day-ahead market. Market participants outside of the CAISO balancing area are concerned that high demand for intra-day gas will expose them to price spikes that day-ahead reference level calculations do not cover.

DMM agrees with the ISO's assertion that additional flexibility to reflect cost expectations in the day-ahead market to accommodate infrequent gas price spike scenarios does not directly address this problem. In fact, creating reference level calculations that attempt to account for the universe of all possible gas price spikes may actually do more to harbor the exertion of market power than it does to represent fuel costs accurately. DMM reiterates the importance of maintaining reference level calculations that allow resources to reflect their costs appropriately without being unnecessarily high.

DMM also agrees that the ISO should instead focus on greater certainty around gas procurement targets to reduce un-hedged exposure to intra-day price spikes. DMM supports the ISO's proposal to provide market participants with more accurate day-ahead procurement targets in the Next Day Gas Day 2 (GD2) horizon by supplying them with the D+2 results. This should reduce gas procurement uncertainty, and ultimately the exposure to intra-day gas price premiums, inasmuch as D+2 schedules are a more accurate indication of financially binding day-ahead schedules than the 48-hour residual unit commitment (RUC) schedules that market participants within CAISO currently receive.

Accommodating gas cost variation in reference levels

Some stakeholders are concerned that index-based reference levels do not accurately represent realized gas costs because they do not account for the spread of gas market prices, or premiums for fixed price contracts. Some stakeholders are also concerned about the mismatch between the gas and electric timelines, which may cause inaccurate reference levels for hour-

ending (HE) 1 to HE7, and a lack of actual gas cost information in time to submit manual reference level change requests by the deadline for the day-ahead market.

In addition to discussion of these issues in the working group process, DMM has also had discussions with market participants in the WEIM about issues with minimum load costs that do not reflect updated gas costs, leading to higher gas burn when the optimization moves their resources to operate at minimum load of higher multi-stage generator (MSG) configurations. DMM understands this situation can create operational challenges or significant added expense for resources that are attempting to manage limited gas supplies through energy bids, but are unable to do so to the same extent in MSG configuration minimum load costs.

DMM recognizes that this issue may be particularly significant for entities in the Desert Southwest that have limited gas storage capabilities. Resources with limited gas storage that the optimization moves to the minimum load of a higher configuration in real-time than the market participant originally planned for may have difficulty reflecting higher intra-day gas costs by the deadline for manual reference level change requests. DMM recommends the ISO continue discussions with market participants to provide guidance on how best to reflect these gas limitations in the market.

Reference levels should not include asset management strategy costs

DMM agrees with the ISO that reference levels should not include costs related to a resource's asset management strategy, such as contract premiums. Further, the issue paper cites DMM's previous analysis that shows using an approximation of GD2 prices just prior to the day-ahead market run ensures that virtually all gas purchased in the next day market is within the default energy bid (DEB) and commitment cost scaled levels. This includes the reference levels for HE1-HE7.[2]

Increasing the reasonableness threshold may be inefficient

Some stakeholders suggested the ISO increase the reasonableness threshold to accommodate day-over-day gas price volatility. DMM agrees with the ISO on the impact an increased reasonableness threshold would have on reference level accuracy. If Next Day Gas Day 1 (GD1) is the appropriate gas price index (GPI) for HE1-HE7, GD2 is the appropriate GPI for HE8-HE24, and the real-time reference level that is based on GD2 is static for the day, then intra-day price changes from GD1 to GD2 may cause reference levels to over- or under-estimate actual costs, depending on the direction of the movement.

However, increasing the reasonableness threshold to accommodate price decreases between GD1 and GD2 in order to make reference levels more accurately reflect actual costs during HE1-

[2] *Comments on the Commitment Costs and Default Energy Bid Enhancements – Issue Paper*, Department of Market Monitoring, November 29, 2016: https://www.caiso.com/Documents/DMMComments-CommitmentCostsandDefaultEnergyBidEnhancementsIssuePaper.pdf

HE7 would do so at the expense of over-estimating costs in most hours. DMM believes it is inefficient to increase overall costs to accommodate the few times gas variability is not covered by reference level headroom and automated reference level change requests. Market participants can use manual reference level change requests if these other mechanisms do not cover their gas costs.

Some stakeholders also suggested the ISO increase the reasonableness threshold to accommodate gas price dispersion. DMM agrees with the ISO that increasing the potential for resources to reflect higher costs increases the risk of inflated costs in the market. It is not clear from the ISO's example of the variance of index prices from February 12-19, 2021 how beneficial an increase in the reasonableness threshold would be to cover costs with a heavily skewed distribution of prices. An increase in the reasonableness threshold to cover these large variances on a relatively few amount of days would most likely be less efficient than the current practice of manual reference level change requests.

DMM believes reference levels should allow resources to reflect their costs accurately without being overly conservative for all hours. If reference levels over-estimate the marginal costs of resources, this can allow resources to exert market power up to those reference levels. DMM continues to highlight the importance of maintaining incentives for market participants to procure gas at the lowest possible cost.[3] If market participants can recover whatever gas cost they pay due to a high reasonableness threshold that accounts for the spread of gas market transactions, then participants lose the incentive to procure gas at lower costs, which could affect electricity prices. DMM recommends the ISO and stakeholders focus on ways to make more targeted changes for cases in which gas costs may actually exceed the indices, rather than simply increasing the reasonableness thresholds.

The ISO and stakeholders should determine if the administration costs of using dynamic input gas prices is worth the extra reference level accuracy

Stakeholders suggested the ISO also use dynamic input prices to accommodate day-over-day gas price volatility. DMM agrees that using the "correct" gas day price for HE1-HE7 would increase the accuracy of reference levels compared to actual gas costs for HE1-HE7 with large intra-day gas price volatility between GD1 and GD2. This increase in accuracy would not come at the expense of overestimating costs in other hours, like increasing the reasonableness threshold would. DMM also acknowledges that without sufficient evidence of a systematic underestimation of HE1-HE7 reference levels, administrative cost may be the determining factor when choosing to implement dynamic input prices.

[3] *Phase 2 of Comments on the Commitment Costs and Default Energy Bid Enhancements – Issue Paper*, Department of Market Monitoring, December 12, 2016: https://www.caiso.com/Documents/AdditionalDMMComments_CommitmentCosts_DefaultEnergyBidEnhancmentsIssuePaper.pdf

GPI calculations should not be based off the highest cost fuel region that a resource can access

Stakeholders are also concerned with the difficulty generators that switch fuel regions or fuel-types may have reflecting their costs in the market. During working group discussions about resources that have unique supply arrangements with multiple suppliers, stakeholders suggested basing GPI calculations on either the highest cost fuel region or a weighted average across multiple regions rather than the lowest priced region. DMM agrees with the ISO that always simply using the highest cost fuel region disincentivizes competitive behavior.

DMM understands that participants may face unique fuel supply circumstances that result in costs that may not be reflected in the headroom afforded to default energy and commitment costs or reasonableness thresholds. DMM agrees with the ISO that market participants have access to other mechanisms—such as negotiated default energy bids (NDEBs), negotiated variable operations and maintenance (VOM), and opportunity costs—to help accommodate these unique cost circumstances. However, DMM does not oppose continued discussions to calculate a GPI that may better reflect unique or regionally specific fuel supply circumstances.

Accessibility of reference level change request process

DMM views the automated and manual reference level change requests as the appropriate mechanisms to handle short term gas price volatility that is not covered by normal reference levels. This is because it is more efficient to address these abnormal instances individually as opposed to creating overly conservative reference levels that inflate prices in all periods. However, stakeholders are concerned with the complexity of the reference level change request process, and the timing of when actual cost information is available compared to submission deadlines.

DMM has had discussions with market participants, and understands that the current reference level change request process and functionality may not accommodate some unique fuel supply arrangements. For instance, a participant may need to change gas hubs in the real-time, but cannot do so because the CAISO Masterfile only allows one gas hub for each resource. An NDEB is probably the best mechanism to accommodate this situation for energy bids. However, DMM encourages the ISO and market participants to identify potential procedural issues with the reference level change request process.

DMM also recommends the ISO continue discussions with market participants to determine if they need additional education to better utilize the manual change request process, or if there is a systematic issue with the timing of when market participants can reasonably get cost verified documentation such that manual reference level changes are unrealistic.

Gas burn limitations

Stakeholders are concerned that gas burn limitations issued by gas companies are not reflected in the market for WEIM balancing areas. DMM agrees with the ISO that ISO policies should not

disincentivize resources to follow gas pipeline instructions. DMM continues to recommend not including OFO costs in reference level change requests. If participants can recover costs that signal gas system constraints through reference levels in the electric market, then their demand for gas may not be as sensitive to these price signals. DMM agrees with the findings from the Federal Energy Regulatory Commission (FERC) that this could jeopardize the reliability of the natural gas pipeline and transmission systems.[4]

In addition to discussions in the working group, DMM has had discussions with market participants in the WEIM about their ability to reflect fuel limitations in the market when they do not have gas storage. For example, participants without gas storage may purchase a fixed amount of gas in the day-ahead, and may not be able to follow their schedule in real-time if they use all of that supply earlier than expected in the operating day. In situations like this, some market participants have sought clarity on how best to communicate with the ISO about these limitations using tools such as bid prices, bid ranges, or outages.

DMM recommends the ISO work with market participants to identify the situations where WEIM and future EDAM resources may need to manage limited gas supplies throughout the day, and develop clear guidance on how to manage these limitations. Where such limitations are economic, i.e., a matter of needing to purchase additional gas at a higher cost, the ISO and stakeholders should develop an approach to appropriately account for these costs in a manner that still incentivizes least cost fuel procurement.

[4] California Independent System Operator Corporation, 172 FERC ¶ 61,263, September 2020, pp 14-15: https://www.caiso.com/documents/sep21-2020-letter-order-accepting-commitment-cost-default-energy-bid-enhancements-ccdebe-er20-2360.pdf

New York Independent System Operator, Inc., 154 FERC ¶ 61,111, February 2016, p 18: https://www.ferc.gov/sites/default/files/2020-05/E-6_80.pdf