

WPTF Comments on ISO Proposal for Alignment of RTO DA Scheduling Process with new Timely Gas
Nomination Cycle at 11 a.m. PPT per FERC order 809

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Ellen Wolfe, Resero, for WPTF, 916-791-4533, ewolfe@resero.com

The CAISO has initiated a stakeholder process with a conference call on April 29, 2015 during which the CAISO explained that FERC has now issued Order 809 changing the gas Timely nomination cycle from 9:30 a.m. PPT to 11:00 a.m. PPT. The FERC order instructs RTOs to correlate their day-ahead scheduling with the revised natural gas scheduling process or show cause as to why its scheduling processes do not need to be changed. The ISO has requested input from stakeholders on potential scenarios for compliance.

In accordance with FERC order 809, FERC must determine whether the ISO or RTO's day-ahead scheduling is just and reasonable and require the RTO to file tariff changes to adjust the time at which the results of its day-ahead energy market commitment process are posted that is sufficiently in advance of the Timely and Evening Nomination Cycles to allow gas-fired generators to procure natural gas supply and pipeline transportation capacity, or to show cause why such changes are not necessary. Each ISO or RTO must explain how its proposed scheduling modifications are sufficient for gas-fired generators to secure gas supply prior to the Timely and Evening Nomination cycles.

The ISO seeks comments on May 6, with a stakeholder call on May 15 and a second round of comments on May 27.

In its comments, WPTF wishes to provide an overview of the current process, and then address implications of the ISO proposal and address the questions posed by the CAISO.

Overview of Current Process:

Currently gas and power are procured in bilateral markets between approximately 5:30 a.m. and 6:30 a.m. Gas procurement continues beyond 6:30 a.m., although at a much lower quantity, as gas trades are then provided to the gas schedulers to submit by 9:30 a.m. for the current Timely cycle. Once trades are submitted, the DA trading process is informally considered complete, and ICE publishes a daily gas index at 10 a.m. We presently do not know if ICE will change their publication timeline. ICE has indicated that they will evaluate market volume changes when considering changes to their index publication timing. Since power generators are not the only natural gas customers, it is unknown as to the other customers' demand will affect the outcome.

Each morning, generator owners ("Suppliers") must estimate the CAISO DA dispatch for the generation facilities they manage, and during the gas procurement period (at 5:30 a.m. PPT), purchase gas to meet an anticipated CAISO dispatch. The CAISO accepts DA supply bids, typically based on DA gas prices, at 10 a.m. and IST schedules at 11 a.m. The CAISO then issues DA energy schedules at 1 p.m., and a Supplier must then manage any misalignment of gas procured and previously scheduled on the Timely cycle with its new CAISO DA energy schedule. Suppliers must manage these imbalances through intraday gas sales and /or follow pipeline imbalance rules on Local Distribution Company ("LDC") or Interstate pipelines.

Intraday trading is generally completed to support either the Evening Cycle at 4:00 p.m. PPT, or the Intraday (same day) scheduling cycles, ID 1 and ID2 at 8:00 a.m. and 3:00 p.m. PPT. Under Order 809, a new ID3 cycle at 5 p.m. is added. Suppliers have price risk between DA and intraday when re-adjusting gas procurement to match the CAISO dispatch.

The CAISO has proposed the following 3 alternatives to respond to FERC Order 809:

Alternative 1 – Move DA market timeline up to 7 a.m. - 10 a.m.

Alternative 2 – Keep current DA market timeline at 10 a.m. - 1 p.m.

Alternative 3 – Move the DA market timeline out to 12:00 p.m. - 3:00 p.m.

The CAISO has provided the following questions to begin the discussion of the alternatives.

1. How much gas do you procure through the Timely market? How would that change with the new nomination deadline? Does the deadline impact operations (e.g., leads to more self-scheduling or less economic bidding in the real-time)?

WPTF does not have individual Supplier data. As the market works today, to ensure that a Supplier has adequate gas to support a possible CAISO DA schedule, and to reduce the cost to provide the energy to the market, Suppliers may procure a significant quantity of gas before the DA gas trading timeline that begins at 5:30 a.m., typically 7 hours prior to the CAISO issuing a DA schedule. This can incent a Supplier to submit self-schedules for at least part of their generation quantities so as to not be subject to LDC balancing rules and intraday gas resales.¹ There is no index for intraday gas costs, and when a Supplier has to procure large quantities of gas in intraday markets, it can be difficult to obtain those quantities and/or the prices are not reflective of DA gas ICE indices. The cost to manage the gas imbalance needs to be addressed, and could potentially be addressed by reducing imbalances if DA schedules are issued before the Timely cycle. When the ISO commits a unit, the rules should provide sufficient opportunity for a supplier to at least break even on fuel costs. LDCs and interstate pipelines continue to tighten gas balancing rules, forcing more costly intraday gas procurement or penalties to keep the gas at the wellhead.

¹ Reducing self-scheduling becomes difficult under the present DA CAISO scheduling process and current bidding rules, as Suppliers have procured large quantities of gas which are typically difficult to liquidate if the Supplier does not receive a DA schedule. However, gas can almost always be moved at a price, and the ability to recover such costs or cost risks could likely reduce the levels of self-scheduling.

2. Are the 3 alternatives appropriate and viable for market participants? Are there more alternatives?

Alternative 1 – Move DA market timeline to 7 a.m. to 10 a.m. (before the Timely cycle)

Alternative 2 – Keep current DA market timeline from 10 a.m. to 1 p.m. (similar scheduling issues as are experienced today)

Alternative 3 – Move the DA market timeline to 12:00 p.m. to 3:00 p.m. (effectively similar to Alternative 2, but allows VERs to possibly improve their DA forecast)

WPTF finds it instructive to distinguish between *scheduling* viability and *financial* viability. While each alternative may provide for viability from a physical scheduling perspective, a viable alternative must also be financially workable (at least not produce harm) to the supplier - which will in turn reduce cost to consumers. The ISO's objective should be to assign risk to the entity which can best effectively manage the risk. The question of viability should consider what balances overall risk and ultimately costs. Alternative 1 can reduce the risk premium for gas quantity, and better align volume with ISO DA dispatch schedules, reducing the risk premium for volumetric uncertainty. Alternate 1 may also reduce price risk, but this is yet to be determined, and will evolve as nationwide gas trading may either trade at the same time, or may extend up to the new Timely nomination cycle. Price risk must still be managed. Even under Alternate 1 there is no inherent feature that ensures price consistency during the gas trading period. As a result, the CAISO needs to ensure cost recovery for Suppliers. Consumers costs may likely be lower if Suppliers can express bids to a bid for commitment costs and incremental energy (as a normal market would operate), and are mitigated if they have market power.

Being able to procure gas during the ISO market timeline, with a Supplier able to buy some of its anticipated gas during the normal daily trading process, and then to be able to true up its gas requirements after ISO DA schedules are issued, may result in the ability to procure DA gas at - or near - DA prices and in quantities that more accurately reflect the need.

Lastly, given the FERC order, with Alternate 1 there is mechanism to provide for the DA gas price to be better reflected in both the commitment cost run and the economic dispatch run, and that other ISO mitigation activities could be reduced or better reflect market conditions. In this sense Alternative 1 may be more viable.

3. What are the benefits and concerns for each alternative? Please be explicit and describe both operational and financial impacts.

Alternative 1:

Again, we wish to draw the distinction between gas scheduling and gas trading. The FERC order changes the gas Timely nomination (*scheduling*) cycle from 9:30 a.m. PPT to 11:00 a.m. PPT. However, it will not necessarily cause gas *trading* to place at the same time as the scheduling timeline or whether most gas will trade concurrently with the bilateral power market at 5:30 a.m. PPT, or whether some gas trading will take place from 10:00 a.m. to 11:00 a.m. The market will develop, based on the new timely cycle and potential ISO changes. There may or may not be significant price changes between 5:30 a.m. and 10:00 a.m.²

Alternative 1 would change the CAISO bid submission timeline to 7 a.m. for DA bids, and 8 a.m. for inter-SC schedules and 10 a.m. for issuing DA energy schedules. It is reasonable to assume that gas and power trading would still take place from 5:30 a.m. to 6:30 a.m. PPT, and that some if not most of a Supplier's anticipated gas requirements would be procured in this timeframe. DA bilateral and intertie trading would need to be completed by the anticipated 7 a.m. timeline for submission of DA bids to the CAISO. It is also reasonable to expect that at 10 a.m. when the CAISO issues DA schedules, Suppliers could procure the balance of their gas needs or sell excess gas in the DA gas market, prior to the need to submit gas schedules on the new Timely nomination cycle at 11 a.m. However, *price* risk will still remain, as there is no guarantee that the gas price will not change during the trading period prior to Timely. It would follow that ICE would likely publish gas indices at 11:30 a.m. which would be consistent with its publishing timeline today, at 30 minutes after the Timely cycle.

Benefits: In addition to the ability to procure quantities of gas according to the CAISO DA dispatch schedule at a DA gas index price, a Supplier could better minimize imbalance penalties and procure gas pipeline transportation capacity in quantities that better reflect the actual DA dispatch schedule. As LDCs introduce more onerous gas balancing requirements (and penalties) and potentially move to ratable flow, or potentially hourly or block flows, the ability to procure gas in a more granular (hourly) will better align

² It is important that the CAISO recognize that there must be some provision to accommodate gas cost run up (differences in gas costs from index) and to continue to consider that Suppliers may offer energy at a bid price, and the CAISO and/or load may or may not choose to procure it. This is an important distinction, as a Supplier needs to recover its operating costs, and the CAISO rules need to accommodate bids. As the CAISO Bidding Enhancement process recognizes, there are two constructs that the ISO may consider. (1) Allowing Suppliers to provide a bid for energy and for the CAISO to impose market power mitigation measures when, through a visible, transparent process, it is determined that a Supplier has market power in the immediate situation, and (2) Suppliers providing commitment cost and energy bids subject to caps associated with the gas daily index, but with some means for recovery of costs demonstrated to be above the index-based caps.

gas and energy prices and reduce scheduling and imbalance risk or excess costs for Suppliers, and ultimately consumers.

Dis-benefits: The earlier bid submission deadline may have adverse effects on import/export transactions. An importer, for example, loses some potential optionality and optimization value with bids due as early as has been proposed, and power markets may be less liquid after the bid deadline (not the IST deadline, which is a financial transfer alone). That loss of liquidity could be somewhat concerning to some in the market that continues to trade bilateral energy from 7-9 today. To the extent the CAISO may be able to collapse the processing time closer such that the bid submission time can be moved closer to the gas nomination time, this adverse impact could be lessened.

Alternative 2: Alternative 2 is essentially the status quo. The Timely cycle would be moved from 9:30 a.m. to 11:00 a.m. PPT, however this would be in the middle of the CAISO DA market timeline (10 a.m. to 1 p.m.), so Suppliers would be exposed to the same risk as today. Suppliers must anticipate a CAISO dispatch schedule, buy gas at 5:30 a.m. PPT, schedule that gas 1-1/2 hour later (11 a.m. instead of 9:30 a.m.), then at 1 p.m. procure or sell gas intraday to balance gas to its CAISO DA schedule. Alternative 2 offers no substantial change and no improvement or change in the alignment of the gas and energy markets.

Alternative 3: Alternative 3 moves the CAISO market timeline to much later in the day, noon to 3 p.m. This option could be quite disruptive to current energy scheduling practices and shift or create additional personnel requirements while adding little or no benefit. It is likely that Suppliers would still procure gas at 5:30 a.m. PPT and then submit in the Timely cycle, and the result would be very close to Alternate 2. While it is possible that VERs may be able to improve their forecast, the actual difference in forecast accuracy from moving from 10 a.m. to noon will probably not result in much of a change in the forecast accuracy for a DA VER energy schedule. It is reasonable that much of the VER energy will remain scheduled closer to real time. This Alternative does not alleviate gas price risk.

4. Is CAISO differently situated than other organized markets? How so?

Yes, there are several aspects in which the CAISO market is different.

Time Zone: The California markets trade 2 hours clock time earlier than central time, thus power schedules that are aligned with national gas timelines typically take place early in the day. By moving the Timely cycle out 1-1/2 hours, if the CAISO day-ahead market timeline is moved to be completed before the Timely nomination cycle deadline (7-10 a.m.), then the gas market would need to adjust to a slightly longer open period (until 11 a.m.), and ICE would need to respond to its publication of the daily gas index price, likely to occur ½ hour after the Timely cycle (11:30 a.m. PPT) if it follows its current practice of today.

Supply Mix: The CAISO supply mix is different from other regions and the growth of variable renewable resources will place increasing emphasis on the need for efficient coordination of gas and electric scheduling practices. Uncertainty in both the magnitude and hourly timing of gas burns will make

purchasing and nominations of natural gas more complex, and if left uncoordinated, will place gas-fired generators at significantly more risk.³

Market Structure: There is no organized capacity market in the CAISO. The CPUC's RA does not provide sufficient revenues to cover fixed costs. With disassociated markets in which a Supplier must attempt to obtain sufficient revenues to cover its costs, aligned gas and electric dispatch could potentially reduce some of the risk premium that is currently required to manage daily estimation of generation unit dispatch and the associated necessary gas procurement. This market structure, coupled with the CAISO mix means that the CAISO calculates a commitment cost, and then often either (1) dispatches plants to their near full capacity, in particular with short start units, requiring Suppliers to guess the real time dispatch, or else procure gas after the ISO has operated the unit, or (2) leaves plants at their minimum load level – offering no opportunity for such a supplier to earn infra-marginal rents. If CAISO continues to impose its calculated commitment costs onto Suppliers, there will be more areas in which Suppliers are missing revenues, or are exposed to additional costs – necessitating a need for a market that lets suppliers reflect all costs in their bids – subject to some means of market power mitigation.

Conclusions:

At this time WPTF finds costs and benefits to all options. Although we prefer Option 1 for its potential to align the CAISO markets and gas scheduling to a greater extent, we are concerned about possible adverse impacts on trading. If the ISO pursues Alternative 1, we would like to encourage the CAISO to explore further variations of this alternative, for example, a market run time of 7:30-10:30, or 8:00-10:30, if the CAISO can compress its turnaround time and/or publish interim advisory results. We look forward to the further dialog in the ISO's process.

WPTF remains concerned about a number of adjunct issues that will need to be addressed in the balance of the ISO's bidding enhancement process for the entire design to be efficient, including assumptions that 1) all necessary gas is actually available at day-ahead index (post 10 a.m. gas is not traded at a different price); 2) the day-ahead gas index is the "right" price (even though it may not include OFO, balancing, LDC and other costs); 3) the presumption of the supplier bearing the fuel price risk absent consistent means to recover such costs through the spot market and absent a capacity market that provides sufficient margins for unrecovered marginal costs let alone less than complete fixed cost recovery 4) ratable/non-ratable flows and costs for such 5) that enough of all the gas trades, especially in volatile markets, are either transacted on ICE or reported to Platts to become reflected in the index; and 6) that

³ The ability of CAISO to procure energy from suppliers in the real time, with essentially no regard for gas costs that have changed interferes with a supplier's ability to value the cost of hedging forward gas prices and can suppress short-run LMPs relative to the action cost of provision.

increased penetration of intermittent generation and thus greater non-ratable burns will not impact western gas markets.