

Memorandum

To: ISO Board of Governors

From: Eric Hildebrandt, Executive Director, Market Monitoring

Date: February 4, 2019

Re: Department of Market Monitoring Comments on Intertie Deviation Proposal

This memorandum does not require Board action.

EXECUTIVE SUMMARY

Management is proposing to strengthen the penalties on undelivered or declined intertie resource schedules. The ISO also proposes to improve incentives for importers to submit transmission tags and accept or decline cleared import bids sooner. The Department of Market Monitoring (DMM) supports the proposal as an improvement over the current market design. These changes should increase the reliability of import schedules and reduce uncertainty about imports that may not be delivered in the real-time market. This decreased uncertainty could in turn reduce the amount of additional energy that the ISO sometimes procures on interties and other steps that ISO operators take to defend against various uncertainties in the real-time market. To realize these potential benefits, it is important that undelivered imports be accurately tracked so that the ISO operators have an accurate indication of the potential level of undelivered imports when taking actions to defend against various load and supply uncertainties in the real-time market.

COMMENTS

Background

As noted in the *Draft Final Proposal*, the ISO's current charge for declined or non-delivered imports dates back to spring of 2007, when DMM raised concerns about the high level of declines by imports occurring in the real-time market.¹ The decline charge that was developed by the ISO and stakeholders at that time only applies if the scheduling coordinator fails to deliver 10 percent or more of total intertie transactions or 300 MWh during any month. This relatively high monthly threshold is rarely exceeded so that the decline charge does not provide a significant financial disincentive for non-delivery of imports under critical system conditions.

¹ *Intertie Deviation Settlement Draft Final Proposal*, December 12, 2018, p.15 (*Draft Final Proposal*).
<http://www.caiso.com/Documents/DraftFinalProposal-IntertieDeviationSettlement.pdf>

The relatively high monthly threshold before the current decline charge is triggered was adopted in part because at that time the ISO settlement system had no way to distinguish between imports that were declined or not delivered due to factors beyond the supplier's control, such as curtailments of transmission by other balancing areas. The ISO systems now allow the ISO to identify import schedules which are not delivered due to transmission curtailments rather than for reasons within the supplier's control.

Thus, under the ISO's proposal, the penalties are applied to all non-delivered imports except schedules which are curtailed by other balancing areas. This represents a major improvement over the current decline charge. The ISO also proposes to enhance incentives for importers to submit transmission tags and accept or decline cleared import bids sooner. These changes should also help reduce the level and market impact of non-delivered imports.

Reliability and market impacts of proposal

The ISO's proposal is aimed primarily at increasing reliability by reducing the potential for large non-deliveries of imports. The new penalties and transmission rules established under the proposal may also have some effect in terms of decreasing the supply and/or increasing the cost of imports. To the extent the proposal eventually allows the ISO to reduce actions taken to defend against this source of real-time uncertainty, the new rules may ultimately reduce costs and increase market efficiency.

However, it is important that undelivered imports be accurately tracked so that the ISO operators have an accurate indication of the potential level of undelivered imports when taking actions to defend against this uncertainty. Any actions taken by grid operators should be based on accurate data on non-delivered imports.

Magnitude and impact of undelivered intertie schedules

The *Draft Final Proposal* states that "in order to maintain stable grid conditions, the ISO operators may be prepared to cover the maximum amount of potential undelivered energy on the interties across all hours." The *Draft Final Proposal* includes analysis indicating that the potential amount of undelivered intertie resources has ranged from about 2,000 to 2,368 MW in the peak ramping hours – hours ending 17 to 20.²

² *Draft Final Proposal*, p. 34-36.

DMM's monitoring of the real-time market indicates that non-delivery of imports can be significant and can have a significant impact on real-time market performance. However, DMM's analysis suggests that the data presented in the ISO's *Draft Final Proposal* may overstate the actual level of non-delivered imports. DMM will work with the ISO to understand these differences so that the level of undelivered imports can be accurately tracked and incorporated in actions operators take to defend against this uncertainty.

DMM also notes that potential undelivered imports represent only one of various load and supply uncertainties in the real-time market. There are other primary sources of uncertainty that drive the various actions operators take to ensure adequate capacity and ramping capability in the real-time market.

Reasons for non-delivery of imports

The opinion of the Market Surveillance Committee (MSC) includes a detailed discussion of the many factors that may theoretically account for some instances of non-delivery, but notes that "it is not clear which of these motives are the dominant causes of non-deliveries" and that "it is possible that there are other important causes that we have not yet identified."³ Three scenarios described by the MSC involve behavior that DMM would consider manipulative.⁴

- The seller delivers more or less than the hour-ahead scheduling process (HASP) schedule in order to impact whether or not the scheduling limit will bind in the fifteen minute market (FMM), thereby creating a more favorable FMM settlement price.
- Raise FMM prices used in settlements by reducing overall supply.
- The power is not delivered to cover the HASP schedule because the seller instead delivered the energy to the ISO as exceptional dispatch transactions.

DMM monitors for this type of behavior and takes appropriate action – such as referring the behavior to FERC's office of Enforcement -- in the event it occurs. While all such referrals are confidential, DMM does not believe that any of these three scenarios represent a significant cause of HASP schedules that are not delivered in real-time. However, in prior reports, DMM has also noted that a pattern of out-of-market purchases on the interties at above-market prices can encourage physical and

³ *Opinion on Intertie Deviation Settlements*, Market Surveillance Committee, January 16, 2019, p 2. (*MSC Opinion*). http://www.caiso.com/Documents/MS-C-DraftOpiniononIntertieDeviationSettlement-Jan18_2019.pdf

⁴ *MSC Opinion*, p 3.

economic withholding of imports from the ISO markets, and has recommended the ISO closely monitor and review such out-of-market purchases.⁵

Real-time market prices

The MSC opinion also questions why real-time prices often do not increase as a result of the impact of the non-delivery of imports and thereby at least partially deter non-delivery. The MSC notes that “If the proposed penalties are implemented without taking steps to address the underlying price formation issues that contributing incenting non-delivery, we are concerned that the changes may be ineffective in materially increasing the degree to which CAISO operators can count on transactions cleared in HASP being delivered.”⁶

DMM notes that analysis provided in the *Draft Final Proposal* indicates that during the days and hours when non-delivery of scheduled imports was highest, real-time prices in the ISO have in fact tended to be *higher* than bilateral prices reported for delivery points outside the ISO.⁷ This price trend is consistent with DMM’s own monitoring, and suggests that higher bilateral prices outside the ISO have *not* usually been a major driver of undelivered imports.

In prior reports, DMM has analyzed and reported extensively on factors that have contributed to the trend of lower real-time prices (compared to day-ahead prices) which has persisted in the ISO markets over the last two years. In most cases, these involve actions taken to defend against load and supply uncertainties and to increase ramping capacity in the real-time market. These include:

- Operator adjustments to increase the load forecast used in the residual unit commitment process, which results in commitment of additional resources after the day-ahead market.⁸
- Commitment of additional units via exceptional dispatch after the day-ahead market.⁹
- Exceptional dispatches for energy above minimum loads to increase ramping capabilities in real-time.¹⁰

⁵ 2017 Annual Report on Market Issues and Performance, June 2018, pp 206-207.
<http://www.caiso.com/Documents/2017AnnualReportonMarketIssuesandPerformance.pdf>

⁶ MSC Opinion, p. 3 and p. 26.

⁷ See *Draft Final Proposal*, Figures 29 and Figure 30, pp. 64-65.

⁸ Q3 2018 Report on Market Issues and Performance, Department of Market Monitoring, November 2018, pp. 47-48. <http://www.caiso.com/Documents/2018ThirdQuarterReportonMarketIssuesandPerformance.pdf>

⁹ 2017 Annual Report, pp. 201-205 and Q3 2018 Report pp.48-52.

¹⁰ 2017 Annual Report, pp. 201-205 and Q3 2018 Report pp.48-52.

- Adjusting the load forecast up significantly in the hour-ahead and 15-minute markets.¹¹
- Blocked shut-down instructions in the real-time market.¹²

Other factors which may tend to drive down real-time prices relative to day-ahead include unscheduled energy from intermittent resources, additional supply from the energy imbalance market, and over forecasting on a day-ahead basis on some days. DMM recognizes the need to ensure reliability and the challenges posed by large volumes of intermittent resources and other sources of uncertainty in the real-time market, but has highlighted how actions taken by grid operators can have the effect of lowering real-time prices.

Rules for resource adequacy imports

As noted in DMM's comments on this initiative and prior DMM reports, DMM has expressed concerns that current rules for resource adequacy imports could allow a significant portion of resource adequacy requirements to be met by imports that may have limited availability and value during critical system and market conditions. Imports used to meet resource adequacy requirements are not required to originate from specific generating units or to be backed by specific portfolios of generating resources. These imports can be bid at any price up to the \$1,000/MWh bid cap and do not have any further obligation if not scheduled in the day-ahead market or residual unit commitment process. The ISO has committed to addressing the issue of resource adequacy bidding and scheduling on the interties in its resource adequacy enhancements initiative.¹³

CONCLUSION

DMM supports Management's proposed changes as an improvement over the current decline charge and e-tagging requirements in terms of ensuring system reliability. These changes may also have some effect in terms of decreasing the supply and/or increasing the cost of imports. To the extent the proposal eventually allows the ISO to reduce steps to defend against this source of real-time uncertainty, the new rules may ultimately reduce costs and increase market efficiency. However, to realize these potential benefits, it is important that undelivered imports be accurately tracked so that the ISO operators have an accurate indication of the potential level of undelivered imports when taking actions to defend against this uncertainty.

¹¹ 2017 Annual Report, pp. 211-214 and Q3 2018 Report pp.46-47.

¹² 2017 Annual Report, p. 217-218 and Q3 2018 Report p.55.

¹³ Intertie Deviation Settlement Straw Proposal, CAISO, October 8, 2018, p. 40:
<http://www.caiso.com/Documents/StrawProposal-IntertieDeviationSettlement.pdf>;