



California ISO

**Use of More Updated Gas Price Index for Mondays in
Temporary Day-Ahead Market**

White Paper

January 11, 2019

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1. Executive Summary

The CAISO proposes to amend its tariff to authorize the use of the Monday-Only Gas price index published by the Intercontinental Exchange (ICE) on Fridays. This will allow the more up-to-date gas price index to be reflected in the Day-Ahead market, consistent with previously CAISO Board-approved policy.

2. Stakeholder Engagement Plan

Date	Milestone
January 11, 2019	White paper and Tariff Amendment
January 22	Comments due on white paper and Tariff Amendment
January 28	Conference Call
January 31	File tariff amendment with FERC

3. Background and Problem Statement

On November 26, 2018, the Federal Energy Regulatory Commission (FERC) approved six temporary measures intended to address the effects of natural gas system limitations on the CAISO's system and market operations related to the limited operability of the Aliso Canyon gas storage facility (Aliso Canyon). One of those measures consists of a process to improve the accuracy of the gas commodity price indices used in the Day-Ahead market by reflecting the most recent gas commodity price information. Specifically, the CAISO's current tariff provisions state that the CAISO will use a volume-weighted average price reported between 8:00 a.m. and 9:00 a.m. PT, which the ICE calculates based on trades transacted on the morning of the CAISO's Day-Ahead market. If that price is not available from the ICE, the CAISO will use the most recently calculated gas price indices. This poses a problem for Mondays.

There are two gas products that trade on the ICE on Fridays:

Weekend Gas Package – Reflects trades on Friday, but covers gas deliveries for the Saturday, Sunday, and Monday power day, which is effectively an average of gas procurement costs across Saturday, Sunday, and Monday.

Monday-Only Gas – Reflects trades on Friday, but covers gas deliveries for Monday's power day, which reflects the market's expectation of prices specific to the Monday power day.

NRG raised the issue that intra-day gas prices on Monday often trade at a significant premium to the weekend package price. As a result, NRG's plants can receive Day-Ahead schedules for Mondays that are based on the weekend package gas price, but

for which NRG ends up procuring same-day gas at a significant premium.¹

The CAISO understands that the three-day weekend package price the CAISO uses in the Day-Ahead market runs on Sunday for the Monday Trade Day is often a poor indicator of the price of procuring Monday-only gas, either through the Monday-Only Gas package that trades on Friday or through the Monday same-day market. The CAISO believes this issue may also affect other market participants.

The CAISO proposes to address this problem by using the Monday-Only Gas price if it is available when the CAISO runs its Monday Day-Ahead market on Sunday. This will help limit the need for extraordinary cost recovery filings with FERC and ensure that the dispatch of gas-fired generation reflects market fundamentals and not an artificially low Weekend Gas Package price. The CAISO understands that the ICE does not always publish a Monday-Only Gas index. However, when the ICE does publish the Monday-Only Gas price index, the CAISO can use that index instead of the index posted for the weekend.

The following table illustrates the differences in the SoCal Citygate Monday-Only Gas package in comparison to the Weekend Gas Package, since 2016 when the CAISO implemented its temporary measures.

TRADE_DT	MONDAY TRADES FROM ICE		SAME-DAY TRADES FROM ICE		DAM PRICE NEXT-DAY TRADES FROM ALL VENDORS
	WGT_AVG_ICE	TOTAL_VOL_UME	WGT_AVG_ICE	TOTAL_VOL_UME	WGT_AVG_ALL_SOURCES
6/27/2016	3.08	80000	3.13	130000	2.85
7/4/2016	2.75	2600			2.68
8/15/2016	3.39	252500	3.66	227200	3.01
9/19/2016	3.09	30000	3.10	233100	2.78
9/26/2016	3.38	326000	3.28	256500	3.06
5/22/2017	3.23	15000	3.45	163300	3.21
5/29/2017	3.13	7900			3.18
8/28/2017	3.67	20000	3.85	448000	3.28
9/4/2017	3.50	25000			3.76
10/23/2017	5.84	6000	9.41	104600	3.58
11/27/2017	4.31	10400	4.90	65700	3.00
3/12/2018	3.38	10000	2.93	98200	2.53
7/23/2018	24.00	15000	40.47	266100	13.45
10/8/2018	3.47	9500	3.62	39000	2.76

¹ Cal. Indep. Sys. Operator Corp., 165 FERC ¶ 61,161 (2018); see NRG's limited protest, filed October 23, 2018, Docket No. ER18-2520, available at <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15080095>.

This tariff amendment is consistent with the policy approved by the CAISO Board of Governors. The CAISO aims to clear its market using the best information available regarding the cost of fuel.²

The current tariff restriction is inconsistent with the reason for adopting the updated price index methodology in the first place because it forces the CAISO to forgo the use of a more up-to-date available index. For Mondays, the current tariff restriction does not factor in the trades for Monday-only and therefore may not capture costs for the additional gas suppliers that may have to purchase for Monday delivery to meet higher generation schedules on Monday. Choosing the index between 8:00 a.m. and 9:00 a.m. PT is particularly important for weekdays other than Monday because the Day-Ahead market bid submission closes at 10:00 a.m. PT on the day prior to the trading day. This gives market participants the ability to change their bid to address any potential gas price issues they face on the trading day. This issue does not arise for Mondays because the Monday-only index is published on Friday and market participants can change their bids up until Sunday morning at 10:00 a.m. PT for the Day-Ahead market for the Monday Trade Day.

The Monday-Only Gas index is also a “volume-weighted average price calculated by the Intercontinental Exchange based on trades transacted for that day on the ICE.”³ The whole purpose of the day-ahead updated index is to ensure the market runs with more up-to-date costs. At the time the CAISO developed the procedure this issue was not apparent and therefore, the CAISO wrote the tariff to accommodate the use of the index it knew captured the more up-to-date gas price information. With experience and through discussions with market participants, the CAISO now is aware of this index and believes it should have the flexibility to use this index.

4. Proposed Resolution

The CAISO proposes to modify the CAISO tariff so that it can also use the Monday-only gas index if available.

Proposed Tariff Amendment:

39.7.1.1.1.3 Calculation of Natural Gas Price

- (a) The CAISO will use different gas price indices for the Day-Ahead Market and the Real-Time Market. If a gas price index is unavailable for any reason, the CAISO will use the most recent available gas price index as

² The Board of governors approved CAISO Management’s proposal to “to improve the gas price information used by the ISO day-ahead market to establish commitment cost bid caps and default energy bids for mitigated energy offers.” The proposed tariff modification is consistent with this policy. Available at: http://www.caiso.com/Documents/Decision_AlisoCanyonGas-ElectricCoordinationProposal-May2016.pdf.

³ CAISO tariff section 39.7.1.1.1.3(b).

set forth in Section 39.7.1.1.1.3(c).

- (b) For the Day-Ahead Market, for all Trading Days except for Monday Trading Days, the CAISO will use a gas price index based on natural gas prices reported by the Intercontinental Exchange one (1) day prior to the applicable Trading Day between 8:00 and 9:00 a.m. Pacific Time for natural gas deliveries on the Trading Day, which is a volume-weighted average price calculated by the Intercontinental Exchange based on trades transacted that day on the Intercontinental Exchange during its next-day trading window. For Monday Trading Days, the CAISO may use the Monday-only index when it is available and reported by the Intercontinental Exchange three (3) days prior to the Monday Trading Day.

This modification would only be in effect until December 31, 2019, contemporaneous with the temporary Day-Ahead index update process. The CAISO is planning on making both of these procedures permanent through later stakeholder processes and tariff amendments.

5. Next Steps

The CAISO will discuss this white paper and the proposed tariff amendment with stakeholders during a conference call on January 28, 2019. Stakeholders are asked to submit written comments by January 22, 2019, to initiativecomments@caiso.com.