

Price Correction Report

Week of March 16 – 20, 2020

Overview

This document is intended to meet the requirements of ISO Tariff section 35.6, and provides the Market Participants with a summary of all price corrections that occurred during the week. For example, report titled with May 5-9, 2014 will cover all corrections made during the week of May 5-9. In a normal situation, it will include trade dates that have price corrections which are due between May 5-9, 2014 based on the five business day for Real-Time market and three business day for Day-Ahead market.

The structure of the report is as follows:

- Price correction listing – this section includes a listing of all the corrections, including market intervals affected, locations, reason (which would tie back to the description of issues section), and method of price correction.
- Description of Issues – this section describes each issue which resulted in a correction in more detail.
- Price-fill report – metrics on the number of empty price intervals that were filled by adjacent interval prices, usually due to failed runs.
- Disconnected Pnode replacement – a listing of Trade Days with replaced IFM Pnodes by interval.

For the week covered by this report, **319** intervals were corrected.

The trade dates covered by this report are:

DAM: 3/11/2020 – 3/17/2020

RTM: 3/9/2020 – 3/15/2020

Correction methodologies

The following are the definitions of the correction methodologies used:

Selective recalculation: The CAISO will selectively recalculate incorrect financially binding prices when the invalid prices are isolated and can be corrected such that no other financially binding prices are affected by the correction.

System recalculation: The CAISO will recalculate all prices for the invalidated market interval using corrected or recreated input data, or repaired software as applicable.

Replacement: If the above correction methods are not applicable and practicable, the CAISO shall use, in place of prices for the binding interval of an invalidated market solution, replicated prices from binding or advisory intervals from the validated market solution in which the market conditions were most similar to the market conditions in the invalidated market solution for the affected interval.

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Price Correction Listing

The following is a list of the corrections made during the week, sorted by date and time. The number to the left of the reason field corresponds to the issue number in the Description of Issues section. The count of corrected Pnode/Apnode for each corrected interval is listed left to the Affected Location field. In case of many intervals with the same correction reason, instead of providing the exact count of corrected Pnode/Apnode, the range of Pnode/Apnode affected is provided and listed in another table. Please note that there are only flex ramp prices corrections or AS price corrections for those intervals that have the Count of Corrected Pnode/Apnode column missing.

Corrections made through selective recalculation: 309

Date	HE	Intervals	Market	#	Reason	Number of corrected Pnodes/Apnodes	Affected Area
03/09/2020	14	2-3	RTD	6	Software Defect	965	Local
03/09/2020	14	9	RTD	6	Software Defect	976	Local
03/09/2020	13	1	RTPD	7	Software Defect	919	Local
03/09/2020	13	2	RTPD	7	Software Defect	931	Local
03/09/2020	14	2	RTPD	7	Software Defect	909	Local
03/09/2020	16	2	RTPD	7	Software Defect	918	Local
03/10/2020	12	1,6	RTD	6	Software Defect	1225	Local
03/10/2020	12	2-3	RTD	6	Software Defect	1228	Local
03/10/2020	12	4-5	RTD	6	Software Defect	1224	Local
03/10/2020	12	7	RTD	6	Software Defect	1298	Local
03/10/2020	12	8	RTD	6	Software Defect	1300	Local
03/10/2020	12	9	RTD	6	Software Defect	1226	Local
03/10/2020	12	10	RTD	6	Software Defect	1219	Local
03/10/2020	12	11	RTD	6	Software Defect	1234	Local
03/10/2020	16	6	RTD	6	Software Defect	1090	Local
03/10/2020	16	7-8	RTD	6	Software Defect	1080	Local
03/10/2020	16	9	RTD	6	Software Defect	1072	Local
03/10/2020	12	1-2	RTPD	6	Software Defect	1225	Local
03/10/2020	12	3-4	RTPD	6	Software Defect	1224	Local
03/10/2020	13	1-3	RTPD	6	Software Defect	1226	Local
03/10/2020	13	4	RTPD	6	Software Defect	1218	Local
03/10/2020	14	1	RTPD	6	Software Defect	1163	Local
03/10/2020	14	2	RTPD	6	Software Defect	1141	Local
03/10/2020	14	3	RTPD	6	Software Defect	1140	Local
03/10/2020	14	4	RTPD	6	Software Defect	1117	Local
03/10/2020	16	2-3	RTPD	6	Software Defect	1077	Local
03/10/2020	16	4	RTPD	6	Software Defect	1068	Local
03/12/2020	10	9	RTD	6	Software Defect	1098	Local
03/14/2020	14	4-6,8,10	RTD	2	Data Input Error	759	Local
03/14/2020	14	7,9	RTD	2	Data Input Error	760	Local
03/14/2020	14,20	11-12	RTD	2	Data Input Error	762	Local
03/14/2020	15	1-4,6-9,12	RTD	2	Data Input Error	765	Local
03/14/2020	15	10-11	RTD	2	Data Input Error	766	Local
03/14/2020	16	1-5	RTD	2	Data Input Error	765	Local
03/14/2020	16	6	RTD	2	Data Input Error	766	Local
03/14/2020	16	7	RTD	2	Data Input Error	767	Local
03/14/2020	16	8	RTD	2	Data Input Error	768	Local

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03/14/2020	16	9	RTD	2	Data Input Error	773	Local
03/14/2020	16	10	RTD	2	Data Input Error	761	Local
03/14/2020	16	11	RTD	2	Data Input Error	779	Local
03/14/2020	16	12	RTD	2	Data Input Error	778	Local
03/14/2020	17	1-2	RTD	2	Data Input Error	760	Local
03/14/2020	17	3-8	RTD	2	Data Input Error	761	Local
03/14/2020	17	9	RTD	2	Data Input Error	762	Local
03/14/2020	17	10	RTD	2	Data Input Error	766	Local
03/14/2020	17	11	RTD	2	Data Input Error	783	Local
03/14/2020	17	12	RTD	2	Data Input Error	796	Local
03/14/2020	18	1	RTD	2	Data Input Error	802	Local
03/14/2020	18	2	RTD	2	Data Input Error	768	Local
03/14/2020	18	3	RTD	2	Data Input Error	772	Local
03/14/2020	18	4,7	RTD	2	Data Input Error	767	Local
03/14/2020	18	5	RTD	2	Data Input Error	811	Local
03/14/2020	18	6	RTD	2	Data Input Error	793	Local
03/14/2020	20	6	RTD	2	Data Input Error	57	Local
03/14/2020	21	1-3,7-9,12	RTD	2	Data Input Error	761	Local
03/14/2020	21	4-6	RTD	2	Data Input Error	762	Local
03/14/2020	21	10-11	RTD	2	Data Input Error	760	Local
03/14/2020	22	1	RTD	2	Data Input Error	760	Local
03/14/2020	22	2	RTD	2	Data Input Error	761	Local
03/14/2020	22	3	RTD	2	Data Input Error	762	Local
03/14/2020	22	4	RTD	2	Data Input Error	745	Local
03/14/2020	22	5	RTD	2	Data Input Error	746	Local
03/14/2020	22	6	RTD	2	Data Input Error	748	Local
03/14/2020	23	1-2	RTD	2	Data Input Error	745	Local
03/14/2020	14	4	RTPD	2	Data Input Error	760	Local
03/14/2020	15	1-3	RTPD	2	Data Input Error	767	Local
03/14/2020	15,21	4	RTPD	2	Data Input Error	761	Local
03/14/2020	16	1	RTPD	2	Data Input Error	765	Local
03/14/2020	16	2	RTPD	2	Data Input Error	766	Local
03/14/2020	16	3	RTPD	2	Data Input Error	762	Local
03/14/2020	16,18	4	RTPD	2	Data Input Error	763	Local
03/14/2020	17	1	RTPD	2	Data Input Error	761	Local
03/14/2020	17	2-4	RTPD	2	Data Input Error	762	Local
03/14/2020	18	1-2	RTPD	2	Data Input Error	766	Local
03/14/2020	18	3	RTPD	2	Data Input Error	767	Local
03/14/2020	19-20	1-4	RTPD	1	Data Input Error		Local
03/14/2020	20	1	RTPD	2	Data Input Error	762	Local
03/14/2020	20	2	RTPD	2	Data Input Error	59	Local
03/14/2020	20	3-4	RTPD	2	Data Input Error	764	Local
03/14/2020	21	1,3	RTPD	2	Data Input Error	753	Local
03/14/2020	21	2	RTPD	2	Data Input Error	764	Local
03/14/2020	22	2-4	RTPD	2	Data Input Error	746	Local
03/14/2020	23	1	RTPD	2	Data Input Error	749	Local
03/14/2020	23	2	RTPD	2	Data Input Error	746	Local
03/14/2020	23	3	RTPD	2	Data Input Error	745	Local
03/15/2020	8	1,4,7-8,10	RTD	2	Data Input Error	747	Local
03/15/2020	8	2-3	RTD	2	Data Input Error	760	Local
03/15/2020	8-9	9	RTD	2	Data Input Error	748	Local
03/15/2020	8	11	RTD	2	Data Input Error	762	Local
03/15/2020	8	12	RTD	2	Data Input Error	763	Local
03/15/2020	9	1	RTD	2	Data Input Error	747	Local
03/15/2020	9	2	RTD	2	Data Input Error	751	Local
03/15/2020	9	3	RTD	2	Data Input Error	759	Local
03/15/2020	9	4-8	RTD	2	Data Input Error	749	Local
03/15/2020	9	10	RTD	2	Data Input Error	763	Local
03/15/2020	9	11-12	RTD	2	Data Input Error	765	Local

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03/15/2020	10,16	1	RTD	2	Data Input Error	762	Local
03/15/2020	10	2,11-12	RTD	2	Data Input Error	781	Local
03/15/2020	10	3,6	RTD	2	Data Input Error	785	Local
03/15/2020	10	4	RTD	2	Data Input Error	767	Local
03/15/2020	10	5	RTD	2	Data Input Error	793	Local
03/15/2020	10	7-8	RTD	2	Data Input Error	796	Local
03/15/2020	10,12	9	RTD	2	Data Input Error	772	Local
03/15/2020	10	10	RTD	2	Data Input Error	766	Local
03/15/2020	11	1	RTD	2	Data Input Error	766	Local
03/15/2020	11	2	RTD	2	Data Input Error	787	Local
03/15/2020	11	3	RTD	2	Data Input Error	789	Local
03/15/2020	11	4	RTD	3	Data Input Error		Local
03/15/2020	11	4	RTD	2	Data Input Error	770	Local
03/15/2020	11-12	5	RTD	2	Data Input Error	768	Local
03/15/2020	11	6-7	RTD	2	Data Input Error	769	Local
03/15/2020	11	8	RTD	2	Data Input Error	772	Local
03/15/2020	11	9	RTD	2	Data Input Error	783	Local
03/15/2020	11	10	RTD	2	Data Input Error	773	Local
03/15/2020	11	11	RTD	2	Data Input Error	796	Local
03/15/2020	11	12	RTD	2	Data Input Error	797	Local
03/15/2020	12	1	RTD	2	Data Input Error	773	Local
03/15/2020	12	2	RTD	2	Data Input Error	784	Local
03/15/2020	12	3	RTD	2	Data Input Error	775	Local
03/15/2020	12	4,10	RTD	2	Data Input Error	767	Local
03/15/2020	12	6	RTD	2	Data Input Error	787	Local
03/15/2020	12	7	RTD	2	Data Input Error	766	Local
03/15/2020	12	8	RTD	2	Data Input Error	765	Local
03/15/2020	12	11	RTD	2	Data Input Error	770	Local
03/15/2020	12	12	RTD	2	Data Input Error	776	Local
03/15/2020	13	7,9	RTD	2	Data Input Error	768	Local
03/15/2020	13	8	RTD	2	Data Input Error	767	Local
03/15/2020	13	10,12	RTD	2	Data Input Error	759	Local
03/15/2020	13	11	RTD	2	Data Input Error	760	Local
03/15/2020	14	1	RTD	2	Data Input Error	758	Local
03/15/2020	14	2-3	RTD	2	Data Input Error	759	Local
03/15/2020	14	4-5,7-11	RTD	2	Data Input Error	760	Local
03/15/2020	14	6,12	RTD	2	Data Input Error	763	Local
03/15/2020	15	1,5,12	RTD	2	Data Input Error	771	Local
03/15/2020	15	2-4	RTD	2	Data Input Error	773	Local
03/15/2020	15	6	RTD	2	Data Input Error	774	Local
03/15/2020	15	7-8	RTD	2	Data Input Error	765	Local
03/15/2020	15	9	RTD	2	Data Input Error	767	Local
03/15/2020	15	10	RTD	2	Data Input Error	768	Local
03/15/2020	15	11	RTD	2	Data Input Error	776	Local
03/15/2020	16	2	RTD	2	Data Input Error	759	Local
03/15/2020	16	3	RTD	2	Data Input Error	760	Local
03/15/2020	16	4-5	RTD	2	Data Input Error	767	Local
03/15/2020	16,18	6	RTD	2	Data Input Error	766	Local
03/15/2020	16	7-9	RTD	2	Data Input Error	764	Local
03/15/2020	16	10	RTD	2	Data Input Error	765	Local
03/15/2020	16	11-12	RTD	2	Data Input Error	770	Local
03/15/2020	17	1	RTD	2	Data Input Error	756	Local
03/15/2020	17	2-3,7-10	RTD	2	Data Input Error	760	Local
03/15/2020	17	4-5	RTD	2	Data Input Error	765	Local
03/15/2020	17	6	RTD	2	Data Input Error	767	Local
03/15/2020	17	11-12	RTD	2	Data Input Error	762	Local
03/15/2020	18	1	RTD	2	Data Input Error	759	Local
03/15/2020	18	4-5	RTD	2	Data Input Error	745	Local
03/15/2020	20	4-5	RTD	2	Data Input Error	751	Local

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03/15/2020	20	6	RTD	2	Data Input Error	770	Local
03/15/2020	21	5	RTD	2	Data Input Error	746	Local
03/15/2020	8	2-4	RTPD	2	Data Input Error	747	Local
03/15/2020	9	1	RTPD	2	Data Input Error	747	Local
03/15/2020	9	2,4	RTPD	2	Data Input Error	749	Local
03/15/2020	10	1	RTPD	2	Data Input Error	764	Local
03/15/2020	10	2-4	RTPD	2	Data Input Error	763	Local
03/15/2020	11	1	RTPD	2	Data Input Error	770	Local
03/15/2020	11	2	RTPD	2	Data Input Error	766	Local
03/15/2020	11	3	RTPD	2	Data Input Error	767	Local
03/15/2020	11	4	RTPD	2	Data Input Error	764	Local
03/15/2020	12	1	RTPD	2	Data Input Error	767	Local
03/15/2020	12	2	RTPD	2	Data Input Error	765	Local
03/15/2020	12	3-4	RTPD	2	Data Input Error	764	Local
03/15/2020	13	1-2	RTPD	2	Data Input Error	771	Local
03/15/2020	13	3	RTPD	2	Data Input Error	768	Local
03/15/2020	13	4	RTPD	2	Data Input Error	763	Local
03/15/2020	14	1	RTPD	2	Data Input Error	761	Local
03/15/2020	14,17	2-4	RTPD	2	Data Input Error	760	Local
03/15/2020	15	1	RTPD	2	Data Input Error	772	Local
03/15/2020	15	2-3	RTPD	2	Data Input Error	773	Local
03/15/2020	15	4	RTPD	2	Data Input Error	766	Local
03/15/2020	16	1-3	RTPD	2	Data Input Error	766	Local
03/15/2020	16	4	RTPD	2	Data Input Error	768	Local
03/15/2020	17	1	RTPD	2	Data Input Error	759	Local
03/15/2020	20	3	RTPD	2	Data Input Error	754	Local
03/15/2020	20	4	RTPD	2	Data Input Error	752	Local
03/15/2020	21	1	RTPD	2	Data Input Error	748	Local
03/15/2020	22	1	RTPD	2	Data Input Error	61	Local

Corrections made through interval replacement: 10

Date	HE	Intervals	Market	#	Reason	Affected Area
03/10/2020	10	5-7	RTD	4	Data Input Error	System
03/12/2020	22	5-8	RTD	5	Software Defect	System
03/14/2020	7	3-5	RTD	5	Software Defect	System

Corrections made through market rerun: 0

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Description of Issues:

1. Data Input Error:

- Invalid AS prices due to data input error, the maximum upward AS requirement was incorrect.

Prices were corrected by selective recalculation.

2. Data Input Error:

- Invalid congestion due to a data input error driven by incorrect enforcement of a contingency.

Prices were corrected by selective recalculation.

3. Data Input Error:

- Invalid flex ramp prices due to a software defect impacting price formation.

Prices were corrected by selective recalculation.

4. Data Input Error:

- Invalid prices due to a data input error impacting market requirement.

Prices were corrected by interval replacement.

5. Software Defect:

- Invalid prices due to a software defect impacting RTCD runs.

Prices were corrected by interval replacement.

6. Software Defect:

- Invalid shadow price on 32214_RIO OSO _115_32244_BRNSWKT2_115_BR_2_1 due to a software defect impacting pricing formation.

Prices were corrected by selective recalculation.

7. Software Defect:

- Invalid shadow price on 32214_RIO OSO _115_32244_BRNSWKT2_115_BR_2_1 due to a software defect impacting pricing formation. Regulation down prices are also impacted by the invalid congestion price.

Prices were corrected by selective recalculation.

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Price Fill Report

A price fill occurs whenever a market run failed to publish to the Settlement system. This usually occurs whenever a market run failed, for example when a market fails to come to a solution. It could also occur when an operator decides that a market is not to be run, for example during a contingency event. Automatic price fills also occur in real-time when an operator chooses to utilize the previous interval's solution for the current interval.

Prices are filled according to the rules in CAISO Tariff section 7.7.9 which states that administrative pricing applies to intervals where we have had a market disruption, and requires the prices to be set differently depending on the number of consecutive market disruptions.

The number of prices which were adjusted by the fill process is as follows.

Total number of filled price intervals: 9

Date	HE	Intervals	Market
03/10/2020	15	7	RTD
03/10/2020	15	8	RTD
03/10/2020	16	1	RTPD
03/12/2020	22	6	RTD
03/12/2020	22	7	RTD
03/12/2020	22	8	RTD
03/14/2020	7	4	RTD
03/14/2020	7	5	RTD
03/14/2020	8	10	RTD

Note: Intervals filled are subject to subsequent price corrections where applicable.

Disconnected Pnode Report

According to Congestion Revenue Rights BPM Section 15, when the IFM cannot identify an electrically connected PNODE within the fixed level of proximity, a post process will be performed to determine the next closest electrically connected PNode and replace the LMP of the disconnected PNode with this price. This price update will be done within the DAM price correction timeline.

The number of prices which were adjusted by the disconnected Pnode process is as follows.

Total number of hours with disconnected pnode price update: 0

Date	HE
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