

Price Correction Report

Week of September 24 – September 28, 2018

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.

For the week covered by this report, **2494** intervals were corrected.

The trade dates covered by this report are:

DAM: 9/19/2018 – 9/25/2018

RTM: 9/17/2018 – 9/23/2018

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 for those intervals that have the Count of Corrected Pnode/Apnode column missing.

Corrections made through selective recalculation: 2491

Date	HE	Intervals	Market	#	Reason	Number of corrected Pnodes/Apnodes	Affected Area
17Sep2018	21	1-6	RTD	6,2,1	Software Defect, Data Input Error	109	Local
17Sep2018	21	2-3	RTPD	6,2,1	Software Defect, Data Input Error	109	Local
18Sep2018	8	1-3,11-12	RTD	5	Software Defect	942	Local
18Sep2018	10	1-12	RTD	5	Software Defect	942	Local
18Sep2018	11	9	RTD	3,2,1	Software Defect, Data Input Error	1493	Local
18Sep2018	11	12	RTD	3,2,1	Software Defect, Data Input Error	1495	Local
18Sep2018	11	10-11	RTD	3,2,1	Software Defect, Data Input Error	1463	Local
18Sep2018	12	1	RTD	3,2,1	Software Defect, Data Input Error	1512	Local
18Sep2018	12	2	RTD	3,2,1	Software Defect, Data Input Error	1489	Local
18Sep2018	12	3	RTD	3,2,1	Software Defect, Data Input Error	1491	Local
18Sep2018	12	9	RTD	3,2,1	Software Defect, Data Input Error	1487	Local
18Sep2018	12	4-6	RTD	3,2,1	Software Defect, Data Input Error	1493	Local
18Sep2018	12	7-8	RTD	3,2,1	Software Defect, Data Input Error	1484	Local
18Sep2018	12	10-12	RTD	3,2,1	Software Defect, Data Input Error	1486	Local
18Sep2018	13	1	RTD	3,2,1	Software Defect, Data Input Error	1493	Local
18Sep2018	13	3-6	RTD	3,2,1	Software Defect, Data Input Error	1494	Local
18Sep2018	13	10-12	RTD	3,2,1	Software Defect, Data Input Error	1490	Local
18Sep2018	13	2,7-9	RTD	3,2,1	Software Defect, Data Input Error	1495	Local
18Sep2018	14	5	RTD	3,2,1	Software Defect, Data Input Error	1480	Local
18Sep2018	14	1-3	RTD	3,2,1	Software Defect, Data Input Error	1494	Local
18Sep2018	14	10-12	RTD	3,2,1	Software Defect, Data Input Error	1483	Local
18Sep2018	14	4,6-9	RTD	3,2,1	Software Defect, Data Input Error	1482	Local
18Sep2018	15	1	RTD	3,2,1	Software Defect, Data Input Error	1495	Local
18Sep2018	15	7	RTD	3,2,1	Software Defect, Data Input Error	1498	Local
18Sep2018	15	2-3	RTD	3,2,1	Software Defect, Data Input Error	1496	Local
18Sep2018	15	10-12	RTD	3,2,1	Software Defect, Data Input Error	1493	Local
18Sep2018	15	4-6,8-9	RTD	3,2,1	Software Defect, Data Input Error	1497	Local
18Sep2018	16	3	RTD	3,2,1	Software Defect, Data Input Error	1486	Local
18Sep2018	16	4	RTD	3,2,1	Software Defect, Data Input Error	1478	Local
18Sep2018	16	5	RTD	3,2,1	Software Defect, Data Input Error	1475	Local
18Sep2018	16	7	RTD	3,2,1	Software Defect, Data Input Error	1464	Local
18Sep2018	16	1-2	RTD	3,2,1	Software Defect, Data Input Error	1485	Local
18Sep2018	16	8-12	RTD	3,2,1	Software Defect, Data Input Error	1458	Local
18Sep2018	17	1-9	RTD	3,2,1	Software Defect, Data Input Error	1461	Local
18Sep2018	17	10-12	RTD	3,2,1	Software Defect, Data Input Error	1462	Local
18Sep2018	18	1	RTD	3,2,1	Software Defect, Data Input Error	1456	Local
18Sep2018	18	4	RTD	3,2,1	Software Defect, Data Input Error	1469	Local
18Sep2018	18	5	RTD	3,2,1	Software Defect, Data Input Error	1470	Local
18Sep2018	18	2-3	RTD	3,2,1	Software Defect, Data Input Error	1464	Local
18Sep2018	22	1-9,12	RTD	5	Software Defect	1372	Local
18Sep2018	23	1-12	RTD	5	Software Defect	1372	Local

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18Sep2018	16,18	6	RTD	3,2,1	Software Defect, Data Input Error	1471	Local
18Sep2018	8	1-2,4	RTPD	5	Software Defect	942	Local
18Sep2018	10	1-4	RTPD	5	Software Defect	942	Local
18Sep2018	12	3	RTPD	3,2,1	Software Defect, Data Input Error	1489	Local
18Sep2018	13	4	RTPD	3,2,1	Software Defect, Data Input Error	1491	Local
18Sep2018	13	1-2	RTPD	3,2,1	Software Defect, Data Input Error	1493	Local
18Sep2018	14	1	RTPD	3,2,1	Software Defect, Data Input Error	1491	Local
18Sep2018	14	2	RTPD	3,2,1	Software Defect, Data Input Error	1480	Local
18Sep2018	14	3	RTPD	3,2,1	Software Defect, Data Input Error	1493	Local
18Sep2018	15	1	RTPD	3,2,1	Software Defect, Data Input Error	1496	Local
18Sep2018	15	2,4	RTPD	3,2,1	Software Defect, Data Input Error	1497	Local
18Sep2018	16	1	RTPD	3,2,1	Software Defect, Data Input Error	1478	Local
18Sep2018	16	2	RTPD	3,2,1	Software Defect, Data Input Error	1477	Local
18Sep2018	16	3-4	RTPD	3,2,1	Software Defect, Data Input Error	1458	Local
18Sep2018	17	1	RTPD	3,2,1	Software Defect, Data Input Error	1461	Local
18Sep2018	17	2-3	RTPD	3,2,1	Software Defect, Data Input Error	1463	Local
18Sep2018	17	4	RTPD	3,2,1	Software Defect, Data Input Error	1462	Local
18Sep2018	18	3	RTPD	3,2,1	Software Defect, Data Input Error	118	Local
18Sep2018	18	4	RTPD	3,2,1	Software Defect, Data Input Error	1472	Local
18Sep2018	18	1-2	RTPD	3,2,1	Software Defect, Data Input Error	1465	Local
18Sep2018	19	1	RTPD	3,2,1	Software Defect, Data Input Error	1526	Local
18Sep2018	19	2	RTPD	3,2,1	Software Defect, Data Input Error	1516	Local
18Sep2018	12,14	4	RTPD	3,2,1	Software Defect, Data Input Error	1481	Local
18Sep2018	13,15	3	RTPD	3,2,1	Software Defect, Data Input Error	1495	Local
18Sep2018	22-23	1-4	RTPD	5	Software Defect	1372	Local
19Sep2018	8	1-2	RTPD	5	Software Defect	942	Local
20Sep2018	8	4	RTPD	5	Software Defect	942	Local
21Sep2018	10	1-12	RTD	5	Software Defect	942	Local
21Sep2018	10	1-4	RTPD	5	Software Defect	942	Local
25Sep2018	4	0	DA	4	Software Defect	77	Local
25Sep2018	6	0	DA	4	Software Defect	88	Local
25Sep2018	7	0	DA	4	Software Defect	96	Local
25Sep2018	8	0	DA	4	Software Defect	83	Local
25Sep2018	9	0	DA	4	Software Defect	80	Local
25Sep2018	11	0	DA	4	Software Defect	90	Local
25Sep2018	12	0	DA	4	Software Defect	109	Local
25Sep2018	13	0	DA	4	Software Defect	116	Local
25Sep2018	14	0	DA	4	Software Defect	157	Local
25Sep2018	15	0	DA	4	Software Defect	137	Local
25Sep2018	16	0	DA	4	Software Defect	143	Local
25Sep2018	17	0	DA	4	Software Defect	153	Local
25Sep2018	18	0	DA	4	Software Defect	158	Local
25Sep2018	19	0	DA	4	Software Defect	156	Local
25Sep2018	20	0	DA	4	Software Defect	159	Local
25Sep2018	21	0	DA	4	Software Defect	150	Local
25Sep2018	22	0	DA	4	Software Defect	104	Local
25Sep2018	23	0	DA	4	Software Defect	84	Local
25Sep2018	1-3,5,10,24	0	DA	4	Software Defect	78	Local

The range of corrected Pnode/APnode for the below trade days regarding correction numbers 1 and 2 are 1-57:

Date	HE	Intervals	Market	#	Reason	Affected Area
17Sep2018	19	6	RTD	2	Data Input Error	Local
17Sep2018	19	1-5,7-12	RTD	1,2	Software Defect,Data Input Error	Local
17Sep2018	21	7-12	RTD	1,2	Software Defect,Data Input Error	Local
17Sep2018	1-18,20,22-24	1-12	RTD	1,2	Software Defect,Data Input Error	Local
17Sep2018	21	1,4	RTPD	1,2	Software Defect,Data Input Error	Local
17Sep2018	1-20,22-24	1-4	RTPD	1,2	Software Defect,Data Input Error	Local
18Sep2018	11	1-8	RTD	1,2	Software Defect,Data Input Error	Local
18Sep2018	18	7-12	RTD	1,2	Software Defect,Data Input Error	Local

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18Sep2018	1-10,19-24	1-12	RTD	1,2	Software Defect,Data Input Error	Local
18Sep2018	12	1-2	RTPD	1,2	Software Defect,Data Input Error	Local
18Sep2018	19	3-4	RTPD	1,2	Software Defect,Data Input Error	Local
18Sep2018	1-11,20-24	1-4	RTPD	1,2	Software Defect,Data Input Error	Local
19Sep2018	11	1-6	RTD	1	Software Defect	Local
19Sep2018	13	1-11	RTD	1	Software Defect	Local
19Sep2018	15	1-6,8-12	RTD	1	Software Defect	Local
19Sep2018	17	7-12	RTD	1	Software Defect	Local
19Sep2018	21	1-5,7-12	RTD	1	Software Defect	Local
19Sep2018	1-10,12,14,16,18-20,22-24	1-12	RTD	1	Software Defect	Local
19Sep2018	1	1	RTPD	1,2	Software Defect,Data Input Error	Local
19Sep2018	17	1,4	RTPD	1	Software Defect	Local
19Sep2018	1,12,14	2-4	RTPD	1	Software Defect	Local
19Sep2018	2-11,13,15-16,18-24	1-4	RTPD	1	Software Defect	Local
20Sep2018	2	4-12	RTD	1	Software Defect	Local
20Sep2018	3	1-3,7-12	RTD	1	Software Defect	Local
20Sep2018	15	1-4,7-12	RTD	1	Software Defect	Local
20Sep2018	19	1-6	RTD	1	Software Defect	Local
20Sep2018	20	10-12	RTD	1	Software Defect	Local
20Sep2018	4-14,16-18,21-24	1-12	RTD	1	Software Defect	Local
20Sep2018	1	1	RTPD	1	Software Defect	Local
20Sep2018	2	3-4	RTPD	1	Software Defect	Local
20Sep2018	3	1-2,4	RTPD	1	Software Defect	Local
20Sep2018	18-19	1-3	RTPD	1	Software Defect	Local
20Sep2018	4-17,21-24	1-4	RTPD	1	Software Defect	Local
21Sep2018	8	1-6,8-12	RTD	1	Software Defect	Local
21Sep2018	9	1-8,10-12	RTD	1	Software Defect	Local
21Sep2018	1-7,10-24	1-12	RTD	1	Software Defect	Local
21Sep2018	1-24	1-4	RTPD	1	Software Defect	Local
22Sep2018	1,9-24	1-12	RTD	1	Software Defect	Local
22Sep2018	1,9-24	1-4	RTPD	1	Software Defect	Local
22Sep2018	2,8	1-2	RTPD	1	Software Defect	Local
23Sep2018	5	1-6	RTD	1	Software Defect	Local
23Sep2018	1,3	1-3	RTD	1	Software Defect	Local
23Sep2018	4,6-24	1-12	RTD	1	Software Defect	Local
23Sep2018	1	1-2	RTPD	1	Software Defect	Local
23Sep2018	2	1	RTPD	1	Software Defect	Local
23Sep2018	3	2	RTPD	1	Software Defect	Local
23Sep2018	5	1-3	RTPD	1	Software Defect	Local
23Sep2018	4,6-24	1-4	RTPD	1	Software Defect	Local

Corrections made through interval replacement: 3

Date	HE	Intervals	Market	#	Reason	Affected Area
19-Sep-18	21	6	RTD	7,1	Software Defect	System
21-Sep-18	8	7	RTD	8	Software Defect	System
21-Sep-18	9	9	RTD	8	Software Defect	System

Corrections made through market rerun: 0

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Description of Issues:

1. Software Defect:

- Invalid prices due to a software defect impacting pricing node LMPs.

Prices were corrected by selective recalculation and interval replacement.

2. Data Input Error:

- Invalid prices due to a data input error impacting Apnode LMPs.

Prices were corrected by selective recalculation.

3. Data Input Error:

- Invalid prices due to data input error affecting resource dispatch.

Prices were corrected by selective recalculation.

4. Software Defect:

- Invalid pnode prices due to a software defect impacting calculation of marginal congestion component of Pricing nodes and Aggregate Pricing nodes.

Prices were corrected by selective recalculation.

5. Software Defect:

- Invalid prices due to a software defect impacting EIM functionality.

Prices were corrected by selective recalculation.

6. Data Input Error:

- Invalid congestion due to a data input error related to outage modeling.

Prices were corrected by selective recalculation.

7. Software Defect:

- Invalid prices due to a software issue impacting resource dispatch.

Prices were corrected by interval replacement.

8. Software Defect:

- Invalid prices due to a software issue impacting price formation.

Prices were corrected by interval replacement.

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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: 4

Date	HE	Interval	Market
19-Sep-18	14	7	RTD
19-Sep-18	14	8	RTD
19-Sep-18	14	9	RTD
19-Sep-18	15	1	RTPD

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