Price Correction Report
Week of July 30 – August 3, 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 occured 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, **2684** intervals were corrected.

The trade dates covered by this report are:

DAM: 7/25/2018 – 7/31/2018
RTM: 7/23/2018 – 7/29/2018

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.

Price Correction Report
Week of July 30 – August 3, 2018

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: 2682

Date	HE	Intervals	Market	#	Reason	Number of corrected Pnodes/Apnodes	Affected Area
23Jul2018	2	5-12	RTD	2	Software Defect	1	Local
23Jul2018	6	1-3,7-12	RTD	2	Software Defect	1	Local
23Jul2018	7	1-9	RTD	2	Software Defect	1	Local
23Jul2018	12	1-8,12	RTD	2	Software Defect	1	Local
23Jul2018	13	1-12	RTD	2	Software Defect	1	Local
23Jul2018	20	3	RTD	3	Software Defect	40	Local
23Jul2018	20	8	RTD	3,1	Software Defect	137	Local
23Jul2018	21	3-10	RTD	2	Software Defect	1	Local
23Jul2018	2	4	RTPD	2	Software Defect	1	Local
23Jul2018	7	1	RTPD	2	Software Defect	1	Local
23Jul2018	17	1-3	RTPD	2	Software Defect	1	Local
23Jul2018	6,12-13,21	1-4	RTPD	2	Software Defect	1	Local
24Jul2018	14	2,5-12	RTD	2	Software Defect	1	Local
24Jul2018	15	1-6	RTD	2	Software Defect	1	Local
24Jul2018	22	3-5	RTD	2	Software Defect	1	Local
24Jul2018	22	3-5	RTD	3	Software Defect	854	Local
24Jul2018	15	1-4	RTPD	2	Software Defect	1	Local
24Jul2018	22	1-2	RTPD	2	Software Defect	1	Local
24Jul2018	22	1-2	RTPD	3	Software Defect	854	Local
24Jul2018	18,20	1	RTPD	3	Software Defect	939	Local
25Jul2018	14	11-12	RTD	3,1	Software Defect	162	Local
25Jul2018	19	7	RTD	3,1	Software Defect	284	Local
25Jul2018	19	8	RTD	3,1	Software Defect	242	Local
25Jul2018	19	12	RTD	3,1	Software Defect	235	Local
25Jul2018	19	10-11	RTD	3,1	Software Defect	233	Local
25Jul2018	19	6,9	RTD	3,1	Software Defect	236	Local
25Jul2018	20	3-7,9-10	RTD	2	Software Defect	1	Local
25Jul2018	20	1-4	RTPD	2	Software Defect	1	Local
26Jul2018	15	1-5	RTD	2	Software Defect	1	Local
26Jul2018	15	1-2	RTPD	2	Software Defect	1	Local
26Jul2018	19	1-3	RTPD	3	Software Defect	939	Local
27Jul2018	11	0	DA	7	Software Defect	133	Local
27Jul2018	13	0	DA	7	Software Defect	157	Local
27Jul2018	14	0	DA	7	Software Defect	161	Local
27Jul2018	15	0	DA	7	Software Defect	170	Local
27Jul2018	16	0	DA	6	Software Defect	911	Local
27Jul2018	17	0	DA	6	Software Defect	901	Local
27Jul2018	18	0	DA	6	Software Defect	879	Local
27Jul2018	19	0	DA	6	Software Defect	873	Local
27Jul2018	20	0	DA	6	Software Defect	914	Local
27Jul2018	2	7-12	RTD	2	Software Defect	1	Local

Price Correction Report
Week of July 30 – August 3, 2018

27Jul2018	21	4-8	RTD	3	Software Defect		939	Local
27Jul2018	24	8	RTD	3,1	Software Defect		264	Local
27Jul2018	3-5	1-12	RTD	2	Software Defect		1	Local
27Jul2018	2	3-4	RTPD	2	Software Defect		1	Local
27Jul2018	5	4	RTPD	8	Software Defect		854	Local
27Jul2018	21	1-4	RTPD	3	Software Defect		939	Local
27Jul2018	3-4	1-4	RTPD	3	Software Defect		854	Local
27Jul2018	3-5	1-4	RTPD	2	Software Defect		1	Local
28Jul2018	16	0	DA	6	Software Defect		895	Local
28Jul2018	17	0	DA	6	Software Defect		849	Local
28Jul2018	20	0	DA	6	Software Defect		852	Local
28Jul2018	21	0	DA	6	Software Defect		842	Local
28Jul2018	18-19	0	DA	6	Software Defect		813	Local
28Jul2018	21	6	RTD	3	Software Defect		854	Local
28Jul2018	21	5-9	RTD	2	Software Defect		1	Local
28Jul2018	22	2	RTD	3	Software Defect		854	Local
28Jul2018	22	12	RTD	3	Software Defect			Local
28Jul2018	22	2-5	RTD	2	Software Defect		1	Local
28Jul2018	23	4	RTD	3,2,1	Software Defect		100	Local
28Jul2018	23	5	RTD	3,1	Software Defect		91	Local
28Jul2018	23	7	RTD	4	Software Defect			Local
28Jul2018	23	2-3,8,10	RTD	2	Software Defect		1	Local
28Jul2018	21	1-3	RTPD	3	Software Defect		854	Local
28Jul2018	22	1-4	RTPD	3	Software Defect		854	Local
28Jul2018	22	1-4	RTPD	2	Software Defect		1	Local
28Jul2018	21,23	1-3	RTPD	2	Software Defect		1	Local
29Jul2018	14	1-12	RTD	2	Software Defect		1	Local
29Jul2018	23	5	RTD	3,1	Software Defect		177	Local
29Jul2018	7	3-4	RTPD	2	Software Defect		1	Local
29Jul2018	14	1-4	RTPD	2	Software Defect		1	Local
30Jul2018	2	0	DA	5	Data Input Error		55	Local
30Jul2018	3	0	DA	5	Data Input Error		53	Local
30Jul2018	4	0	DA	5	Data Input Error		64	Local
30Jul2018	5	0	DA	5	Data Input Error		66	Local
30Jul2018	6	0	DA	5	Data Input Error		179	Local
30Jul2018	8	0	DA	5	Data Input Error		183	Local
30Jul2018	9	0	DA	5	Data Input Error		40	Local
30Jul2018	10	0	DA	5	Data Input Error		205	Local
30Jul2018	11	0	DA	5	Data Input Error		206	Local
30Jul2018	12	0	DA	5	Data Input Error		203	Local
30Jul2018	13	0	DA	5	Data Input Error		299	Local
30Jul2018	15	0	DA	5	Data Input Error		216	Local
30Jul2018	16	0	DA	5	Data Input Error		214	Local
30Jul2018	17	0	DA	5	Data Input Error		215	Local
30Jul2018	18	0	DA	5	Data Input Error		284	Local
30Jul2018	20	0	DA	5	Data Input Error		217	Local
30Jul2018	23	0	DA	5	Data Input Error		208	Local
30Jul2018	24	0	DA	5	Data Input Error		175	Local
30Jul2018	14,21	0	DA	5	Data Input Error		219	Local
30Jul2018	19,22	0	DA	5	Data Input Error		213	Local
31Jul2018	8	0	DA	5	Data Input Error		112	Local
31Jul2018	9	0	DA	5	Data Input Error		129	Local
31Jul2018	10	0	DA	5	Data Input Error		140	Local
31Jul2018	11	0	DA	5	Data Input Error		145	Local
31Jul2018	14	0	DA	5	Data Input Error		250	Local
31Jul2018	15	0	DA	5	Data Input Error		238	Local
31Jul2018	16	0	DA	5	Data Input Error		255	Local
31Jul2018	19	0	DA	5	Data Input Error		265	Local
31Jul2018	20	0	DA	5	Data Input Error		131	Local

Price Correction Report
Week of July 30 – August 3, 2018

31Jul2018	17-18	0	DA	5	Data Input Error		263	Local

The range of corrected Pnode/APnode for the below trade days regarding correction number 1 is 1-51

Date	HE	Intervals	Market	#	Reason	Affected Area
23Jul2018	12	1	RTD	1	Software Defect	Local
23Jul2018	19	1-4,6	RTD	1	Software Defect	Local
23Jul2018	20	4-7,9-12	RTD	1	Software Defect	Local
23Jul2018	1-9,13-18,21-24	1-12	RTD	1	Software Defect	Local
23Jul2018	10	1-2	RTPD	1	Software Defect	Local
23Jul2018	11	1	RTPD	1	Software Defect	Local
23Jul2018	1-9,12-24	1-4	RTPD	1	Software Defect	Local
24Jul2018	9	1-3,7-12	RTD	1	Software Defect	Local
24Jul2018	1-8,10-24	1-12	RTD	1	Software Defect	Local
24Jul2018	1-24	1-4	RTPD	1	Software Defect	Local
25Jul2018	4	3-12	RTD	1	Software Defect	Local
25Jul2018	14	1-10	RTD	1	Software Defect	Local
25Jul2018	19	1-5	RTD	1	Software Defect	Local
25Jul2018	1-3,5-13,15-18,20-24	1-12	RTD	1	Software Defect	Local
25Jul2018	1-24	1-4	RTPD	1	Software Defect	Local
26Jul2018	7	2-12	RTD	1	Software Defect	Local
26Jul2018	12	5-12	RTD	1	Software Defect	Local
26Jul2018	1-6,8-11,13-24	1-12	RTD	1	Software Defect	Local
26Jul2018	12	2-4	RTPD	1	Software Defect	Local
26Jul2018	1-11,13-24	1-4	RTPD	1	Software Defect	Local
27Jul2018	24	1-2,4-7,9-12	RTD	1	Software Defect	Local
27Jul2018	1-23	1-12	RTD	1	Software Defect	Local
27Jul2018	1-24	1-4	RTPD	1	Software Defect	Local
28Jul2018	23	1-3,6-12	RTD	1	Software Defect	Local
28Jul2018	1-22,24	1-12	RTD	1	Software Defect	Local
28Jul2018	1-24	1-4	RTPD	1	Software Defect	Local
29Jul2018	20	1-5,7-12	RTD	1	Software Defect	Local
29Jul2018	23	1-4,6-12	RTD	1	Software Defect	Local
29Jul2018	1-19,21-22,24	1-12	RTD	1	Software Defect	Local
29Jul2018	1-24	1-4	RTPD	1	Software Defect	Local

Corrections made through interval replacement: 2

Date	HE	Intervals	Market	#	Reason	Affected Area
26-Jul-18	7	1	RTD	9,1	Software Defect	System
27-Jul-18	24	3	RTD	8	Software Defect	System

Corrections made through market rerun: 0

Price Correction Report
Week of July 30 – August 3, 2018

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. **Software Defect:**
   - Invalid SUMMIT_ASR-APND apnode and sp-tie price due to a software defect affecting EIM functionality.

   Prices were corrected by selective recalculation.

3. **Software Defect:**
   - Invalid prices due to a software defect impacting EIM functionality.

   Prices were corrected by selective recalculation.

4. **Software Defect:**
   - Invalid prices due to a software defect impacting flexible ramping product and energy prices.

   Prices were corrected by selective recalculation.

5. **Data Input Error:**
   - Invalid congestion due to a data input error related to load distribution factors.

   Prices were corrected by selective recalculation.

6. **Software Defect:**
   - Invalid congestion due to a software defect impacting constraint enforcement.

   Prices were corrected by selective recalculation.

7. **Software Defect:**
   - Invalid congestion due to a software defect impacting outage modelling.

   Prices were corrected by selective recalculation.

8. **Software Defect:**
   - Invalid prices due to a software defect impacting a resource dispatch.

   Prices were corrected by selective recalculation and interval replacement.

9. **Software Defect:**
    - Invalid price due to software defect impacting inter-tie schedules.

    Prices were corrected by interval replacement.

Price Correction Report
Week of July 30 – August 3, 2018

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 consective market distrputions.

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

Total number of filled price intervals: 13

Date	HE	Interval	Market
24-Jul-18	18	6	RTD
26-Jul-18	7	7	RTD
26-Jul-18	7	10	RTD
26-Jul-18	8	3	RTD
26-Jul-18	8	4	RTD
26-Jul-18	8	5	RTD
26-Jul-18	8	6	RTD
27-Jul-18	23	11	RTD
27-Jul-18	23	12	RTD
27-Jul-18	24	1	RTD
27-Jul-18	24	1	RTPD
27-Jul-18	24	2	RTD
27-Jul-18	24	2	RTPD

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