

October 20, 2022

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: California Independent System Operator Corporation
Docket No. ER15-861-____
Western Energy Imbalance Market – Third Quarter 2022
Available Balancing Capacity Report**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) hereby submits its quarterly informational report for the third quarter of 2022 (July 1 to September 30, 2022) on the Available Balancing Capacity (ABC) enhancement for the Western Energy Imbalance Market (WEIM). The quarterly informational report is to provide the Commission with information on the performance of the ABC enhancement and to provide the same information the CAISO provides in its monthly informational reports submitted during a WEIM Entity's first six-month transition period.

Consistent with the Commission's directive in the December 17, 2015 order, the CAISO will continue to file such quarterly reports for at least the first year after implementation of the ABC enhancement, or until the Commission finds the quarterly informational reports are no longer needed.

Please contact the undersigned with any questions.

Respectfully submitted

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California ISO

Western Energy Imbalance Market

July 1 – September 30, 2022

Available Balancing Capacity Report

October 20, 2022

Table of Contents

I. Background 3

II. Available Balancing Capacity..... 4

 A. ABC Submitted to the Market 4

 B. ABC Awarded by the Market..... 7

 C. ABC and Power Balance Constraint Infeasibilities 8

III. WEIM Performance..... 11

 A. ELAP Prices 11

 B. Balancing Test Failures 12

 C. Flexible Ramp Sufficiency Test Failures 13

I. Background

On December 17, 2015, the Federal Energy Regulatory Commission (Commission) approved the California Independent System Operator Corporation's (CAISO) proposed tariff revisions to comply with the Commission's July 20, 2015 order in FERC Docket No. ER15-861-006.¹ The CAISO's proposed tariff provisions enhanced the Western Energy Imbalance Market (WEIM) functionality so that the market systems automatically recognize and account for capacity a WEIM entity has available to maintain reliable operations in its own balancing authority area (BAA), but has not been bid into the WEIM.² This enhancement is referred to as the Available Balancing Capacity (ABC) enhancement. The CAISO implemented the ABC enhancement on March 23, 2016.

Consistent with the CAISO's commitments made in this proceeding, the Commission directed the CAISO to prepare and file with the Commission quarterly informational reports for at least the first year after implementation of the ABC enhancement, and until the Commission finds the quarterly informational reports are no longer needed.³ The quarterly informational reports are to provide information on the performance of the ABC enhancement and to include the same information the CAISO provides in its monthly informational reports submitted during a WEIM entity's first six-month transition period.⁴

¹ *Cal. Indep. Sys. Operator Corp.*, 152 FERC ¶ 61,060 (2015) (July 20 Order); and *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61, 305 (2015) (December 17 Order).

² December 17 Order at P 1.

³ December 17 Order at P 99

⁴ December 17 Order at P 39.

II. Available Balancing Capacity

A. ABC Submitted to the Market

Each WEIM entity can identify and choose the amount of Available Balancing Capacity (ABC) they will make available to the CAISO and the resources supporting this capacity through its resource plan. The WEIM entity submits this capacity to the CAISO on an hourly basis, and it is available for both the Fifteen-Minute Market (FMM) and the five-minute Real-Time Dispatch (RTD). The data in this section shows the ABC bid into, and awarded by, the market in each of the WEIM BAAs for each month within the quarter.

The table below summarizes the percentage of hours in which each WEIM entity submitted upward and downward ABC bids to the WEIM for each month within the quarter. Many entities submitted ABC for nearly all intervals in each month with some exceptions. Idaho Power Company (IPCO) and Seattle City Light (SCL) did not submit any ABC to the WEIM during the quarter.

Table 1: Frequency of ABC Submitted to the WEIM

BAA	July 2022		August 2022		September 2022	
	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity
AVA	100.00%	100.00%	99.87%	99.87%	100.00%	100.00%
AZPS	98.39%	99.73%	97.31%	98.93%	99.44%	99.86%
BANC	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
BCHA	100.00%	100.00%	99.73%	100.00%	100.00%	100.00%
BPA	99.87%	99.87%	100.00%	100.00%	100.00%	100.00%
IPCO	--	--	--	--	--	--
LADWP	29.57%	6.32%	9.54%	7.53%	3.06%	3.06%
NEVP	82.53%	74.87%	91.80%	84.68%	99.44%	88.19%
NWMT	99.87%	99.60%	98.25%	99.46%	99.44%	99.86%
PACE	66.26%	1.61%	74.46%	0.94%	45.83%	3.75%
PACW	0.54%	2.55%	0.40%	2.55%	0.56%	1.67%
PGE	98.79%	--	99.06%	--	98.89%	--
PNM	2.96%	77.42%	0.40%	97.31%	--	67.08%
PSEI	0.40%	--	--	--	--	9.03%
SCL	--	--	--	--	--	--
SRP	100.00%	98.52%	99.73%	98.79%	99.72%	97.78%
TEP	99.60%	99.33%	100.00%	100.00%	100.00%	99.17%
TIDC	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
TPWR	90.59%	97.85%	93.68%	97.45%	99.31%	99.72%

The table below shows the average ABC capacity, in MW, which each WEIM entity submitted to the WEIM for each month within the quarter. BCHA consistently submitted the highest average ABC capacity to the WEIM in both the upward and downward directions.

Table 2: Average ABC Capacity Submitted to the WEIM

BAA	July 2022		August 2022		September 2022	
	Upward Capacity (MW)	Downward Capacity (MW)	Upward Capacity (MW)	Downward Capacity (MW)	Upward Capacity (MW)	Downward Capacity (MW)
AVA	20	20	20.01	20	20	20
AZPS	19.79	19.98	19.99	20	20	20
BANC	14.6	22.37	13.97	22.54	12.08	18.25
BCHA	739.21	300	587.08	300	594.7	300.14
BPA	149.44	160.2	154	167.73	155.73	163.23
IPCO	--	--	--	--	--	--
LADWP	72.85	50.88	78.12	68.78	85.55	65.58
NEVP	26.54	35.58	30.65	42.82	31.47	38.14
NWMT	5	5	5	5	5	5
PACE	14.94	40	18.64	51.43	24.08	75.41
PACW	50	77.89	50	94.74	40	63.33
PGE	16.99	--	17	--	16.99	--
PNM	49.78	30.07	30	32.56	--	32.71
PSEI	58	--	--	--	--	35.92
SCL	--	--	--	--	--	--
SRP	28.72	22.54	32.57	24.42	29.27	24.02
TEP	14.72	22.4	14.36	24.02	16.28	20.24
TIDC	10.07	5	10.5	4.99	11.35	5
TPWR	2.86	2.7	2.73	2.31	2.96	2.49

The table below show the maximum ABC capacity, in MW, which each WEIM entity submitted to the WEIM for each month within the quarter. The highest ABC bid was submitted by BCHA in the upward direction for 1000 MW, which was consistent across all three months of the quarter.

Table 3: Maximum ABC Capacity Submitted to the WEIM

BAA	July 2022		August 2022		September 2022	
	Upward Capacity (MW)	Downward Capacity (MW)	Upward Capacity (MW)	Downward Capacity (MW)	Upward Capacity (MW)	Downward Capacity (MW)
AVA	20	20	30	20	20	20
AZPS	20	24	20	20	20	20
BANC	76	90	60	75	60	75
BCHA	1000	500	1000	500	1000	500

BPA	278	294	290	326	308	326
IPCO	--	--	--	--	--	--
LADWP	125	75	125	180	200	100
NEVP	120	150	70	180	70	200
NWMT	5	5	5	5	5	5
PACE	45	40	50	60	50	125
PACW	50	100	50	100	40	100
PGE	30	--	17	--	17	--
PNM	110	65	30	65	--	67
PSEI	58	--	--	--	--	45
SCL	--	--	--	--	--	--
SRP	100	50	100	50	100	50
TEP	57	105	53	69	75	60
TIDC	15	5	15	5	15	5
TPWR	40	20	35	14	10	5

The table below shows the number of different resources supporting the ABC that the WEIM entities bid into the WEIM in both the upward and downward directions, for each month within the quarter. A maximum of 23 resources supported upward ABC capacity bids submitted by TEP. Some entities used as few as one resource to support their ABC bids.

Table 4: Number of Resources Supporting ABC

BAA	July 2022		August 2022		September 2022	
	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity
AVA	7	7	9	8	5	5
AZPS	9	7	7	7	7	7
BANC	13	17	13	14	14	15
BCHA	2	2	2	2	2	2
BPA	3	3	2	2	3	2
IPCO	--	--	--	--	--	--
LADWP	2	7	2	12	3	8
NEVP	12	13	13	13	12	13
NWMT	2	2	3	3	3	3
PACE	9	3	9	1	8	2
PACW	1	1	1	2	1	1
PGE	6	--	1	--	2	--
PNM	8	8	2	7	--	8
PSEI	1	--	--	--	--	2
SCL	--	--	--	--	--	--
SRP	18	18	21	15	21	17
TEP	23	18	19	18	22	17
TIDC	1	1	3	3	1	1
TPWR	5	5	5	4	5	5

B. ABC Awarded by the Market

The table below shows the frequency of each WEIM entities' dispatched ABC for the FMM market, when the WEIM entities made ABC available, for each month within the quarter. Overall, the market dispatched ABC quite infrequently throughout the quarter. The highest frequency of ABC dispatch in FMM occurred in July 2022 for SRP's bid-in upward ABC capacity. Often, the market dispatched ABC around or less than 1 percent of the time during the month.

Table 5: Frequency of ABC Dispatched by WEIM in the FMM

BAA	July 2022		August 2022		September 2022	
	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity
AVA	0.07%	0.03%	0.10%	--	--	0.04%
AZPS	--	0.10%	0.10%	--	0.14%	--
BANC	--	--	0.03%	0.03%	1.25%	--
BCHA	--	--	0.07%	0.07%	--	--
BPA	0.17%	0.03%	0.61%	0.03%	0.21%	0.04%
IPCO	--	--	--	--	--	--
LADWP	--	--	--	--	--	--
NEVP	0.17%	1.24%	0.27%	1.41%	0.17%	1.84%
NWMT	--	--	0.03%	0.03%	--	--
PACE	--	--	0.34%	--	0.07%	--
PACW	--	--	--	--	--	--
PGE	0.03%	--	0.07%	--	0.04%	--
PNM	--	1.24%	--	3.66%	--	2.22%
PSEI	--	--	--	--	--	--
SCL	--	--	--	--	--	--
SRP	5.98%	3.86%	4.60%	4.13%	4.20%	4.72%
TEP	--	--	--	--	--	--
TIDC	--	--	--	--	0.14%	--
TPWR	--	0.34%	0.13%	0.13%	0.07%	--

The table below shows the frequency of each WEIM entities' dispatched ABC for the RTD market, when the WEIM entities made ABC available, for each month within the quarter. Overall, the market dispatched ABC infrequently throughout the quarter. The highest frequency of ABC dispatch in RTD occurred in August 2022 on SRP's bid-in downward ABC capacity. Often, the market dispatched ABC less than or around 1 percent of the time during the month.

Table 6: Frequency of ABC Dispatched by WEIM in the RTD

BAA	July 2022		August 2022		September 2022	
	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity	Upward Capacity	Downward Capacity
AVA	0.07%	0.01%	0.13%	0.01%	0.10%	0.10%
AZPS	--	--	0.18%	0.08%	0.28%	0.28%
BANC	1.82%	0.54%	1.04%	0.18%	2.04%	0.13%
BCHA	0.01%	--	0.09%	0.31%	--	0.09%
BPA	0.24%	0.08%	0.15%	0.06%	0.52%	0.12%
IPCO	--	--	--	--	--	--
LADWP	--	--	--	0.02%	--	--
NEVP	1.56%	1.15%	1.61%	1.38%	0.29%	0.65%
NWMT	0.01%	--	0.08%	--	--	0.01%
PACE	0.17%	--	0.26%	--	0.05%	--
PACW	--	--	--	--	--	--
PGE	0.02%	--	0.12%	--	0.14%	--
PNM	--	1.01%	--	2.26%	--	1.88%
PSEI	--	--	--	--	--	0.08%
SCL	--	--	--	--	--	--
SRP	6.37%	5.51%	5.63%	8.31%	6.22%	4.53%
TEP	--	--	--	--	--	--
TIDC	--	--	--	--	0.29%	--
TPWR	--	0.29%	0.07%	0.18%	0.05%	--

C. ABC and Power Balance Constraint Infeasibilities

The purpose of the ABC enhancement is to make capacity available that otherwise would not be visible to the WEIM. The primary objective in making such capacity available is that the WEIM can recognize and access that capacity when the conditions warrant its use, namely when the WEIM is running out of capacity made available through economic bids. The ABC is capacity stacked above economic bids, but below the power balance constraint relaxation penalty price. When the market is tight in supply and it has exhausted all effective economic bids, the market clearing process will access the ABC. If there is sufficient ABC, the WEIM will relax the power balance constraint to clear the market. As such, the market clearing process uses the ABC to resolve the power balance infeasibility. If instead the ABC identified is not sufficient to cure the infeasibility, the ABC may be exhausted and there may still be the need to relax the power balance constraint in order to clear the WEIM.

The table below shows the frequency of intervals in which the WEIM entities did not make any ABC available to the WEIM, when there was a power balance infeasibility for each month within the quarter, in the FMM. Specifically, the data in the table below provides the percentage amount of over-supply infeasibilities where downward ABC was needed, and under-supply infeasibilities where upward ABC was needed. No data

indicates that there were no infeasibilities during the period. A metric of 0 percent indicates that in all intervals when there was an infeasibility observed, the WEIM entity did submit ABC to the WEIM. A metric of 100 percent indicates that in all intervals when there was an infeasibility observed, the WEIM entity did not submit any ABC to the WEIM. These instances occurred relatively infrequently throughout the quarter, indicating that the WEIM entities typically had submitted ABC bids during instances when infeasibilities were observed.

Table 7: Frequency of Power Balance Infeasibilities When no ABC was Available in FMM

BAA	July 2022		August 2022		September 2022	
	Over-supply	Under-supply	Over-supply	Under-supply	Over-supply	Under-supply
AVA	--	0.00%	--	0.00%	--	--
AZPS	--	--	--	--	--	--
BANC	--	--	--	--	0.00%	0.00%
BCHA	--	--	--	0.00%	--	--
BPA	--	--	--	0.00%	0.00%	0.00%
IPCO	--	--	--	100.00%	--	100.00%
LADWP	--	--	--	--	--	--
NEVP	85.71%	0.00%	--	--	100.00%	0.00%
NWMT	--	--	--	0.00%	--	--
PACE	--	--	--	--	--	100.00%
PACW	--	--	--	100.00%	--	100.00%
PGE	--	--	--	0.00%	--	--
PNM	--	--	--	100.00%	--	--
PSEI	100.00%	100.00%	--	100.00%	--	100.00%
SCL	100.00%	100.00%	100.00%	100.00%	100.00%	--
SRP	0.00%	--	0.00%	0.00%	18.18%	0.00%
TEP	--	--	--	--	--	--
TIDC	--	--	--	--	--	--
TPWR	--	100.00%	0.00%	0.00%	--	--

The table below shows the frequency of intervals in which the WEIM entities did not make any ABC available to the WEIM, when there was a power balance infeasibility for each month within the quarter, in the RTD. Instances of observed infeasibilities with no submitted ABC occurred more frequently in RTD than FMM.

Table 8: Frequency of Power Balance Infeasibilities When no ABC was Available in RTD

BAA	July 2022		August 2022		September 2022	
	Over-supply	Under-supply	Over-supply	Under-supply	Over-supply	Under-supply
AVA	0.00%	0.00%	--	0.00%	0.00%	0.00%
AZPS	--	0.00%	--	0.00%	--	0.00%
BANC	--	--	--	--	0.00%	0.00%
BCHA	--	--	--	0.00%	--	--
BPA	--	0.00%	--	0.00%	0.00%	0.00%
IPCO	--	--	--	100.00%	--	100.00%
LADWP	--	100.00%	--	100.00%	--	100.00%
NEVP	85.19%	12.50%	55.56%	29.82%	63.16%	0.00%
NWMT	--	--	--	0.00%	--	0.00%
PACE	--	17.65%	100.00%	0.00%	--	100.00%
PACW	100.00%	100.00%	--	100.00%	--	--
PGE	--	0.00%	--	--	--	0.00%
PNM	--	100.00%	--	100.00%	87.50%	--
PSEI	100.00%	63.64%	--	100.00%	--	100.00%
SCL	100.00%	--	100.00%	100.00%	100.00%	--
SRP	0.00%	0.00%	0.00%	0.00%	6.40%	0.00%
TEP	--	5.88%	0.00%	0.00%	0.00%	0.00%
TIDC	--	--	--	--	0.00%	0.00%
TPWR	0.00%	100.00%	0.00%	0.00%	--	0.00%

III. WEIM Performance

This section provides the information the CAISO previously provided in its monthly informational reports submitted during a WEIM entity's first six-month transition period.

A. ELAP Prices

The figures in this section show the WEIM load aggregation point (ELAP) prices⁵ for the FMM and RTD in each WEIM BAA. In prior reports, the CAISO provided these factual prices in comparison to counterfactual prices in order to show the effect of using the pricing waiver of the price discovery mechanism.⁶

The CAISO may correct prices posted on its Open Access Same-time Information System (OASIS) pursuant to the CAISO's price correction authority in section 35 of the CAISO tariff, if it finds: (1) that the prices were the product of an invalid market solution; or (2) the market solution produced an invalid price due to data input failures, hardware or software failures; or (3) a result that is inconsistent with the CAISO Tariff.

The prices presented in the figures below include all prices produced by the CAISO consistent with the CAISO tariff requirements. That is, the trends below represent: (1) prices as produced in the market for which the CAISO deemed valid; (2) prices that the CAISO could and did correct pursuant to section 35; and (3) any prices the CAISO adjusted pursuant to transition period pricing reflected in section 29.27 of the CAISO tariff.

The table below shows the average ELAP prices for all WEIM entities for each month within the quarter. Prices were generally higher on average throughout the summer months and rose to higher than average levels in September 2022 corresponding to the heat event that occurred early in the month.

Table 9: Average FMM and RTD ELAP Prices

BAA	July 2022		August 2022		September 2022	
	FMM (\$/MWh)	RTD (\$/MWh)	FMM (\$/MWh)	RTD (\$/MWh)	FMM (\$/MWh)	RTD (\$/MWh)
AVA	36.13	31.12	67.71	62.77	72.47	64.7
AZPS	72.05	67.38	96.89	89.29	117.77	96.32
BANC	71.67	70.13	105.55	97.4	130.82	107.34

⁵ The ELAP provides aggregate prices that are representative of pricing in the overall BAA.

⁶ In Docket ER15-402, the CAISO reported on prices based on the price discovery mechanism in effect during the term of the Commission's waiver granted in that docket and the prices as they would be if the waiver was not in effect, *i.e.*, what prices would have been had they been on the penalty prices in the CAISO tariff. Because pricing under the waiver pricing is based on the last economic bid price signal, these prices are a proxy of what the prices would have been absent the seven category of learning curve type issues experience in that market. The difference between the counterfactual pricing and the price in effect during the term of the reports in that docket illustrated the market impact of the waiver pricing.

BCHA	36.9	32.32	61.43	57.21	69.23	67.16
BPA	46.36	34.29	80.15	68.34	91.32	77.36
IPCO	68.82	60.46	81.56	75.35	91.74	76.15
LADWP	76.68	70.5	108.15	98.21	135.08	105.58
NEVP	69.13	66.91	93.25	90.34	117.28	90.04
NWMT	41.6	36.59	69.45	64.31	73.2	65.73
PACE	64.82	59.21	81.03	73.75	98.58	75.89
PACW	42.32	37.05	76.21	68.01	89.12	69.05
PGE	43.06	36.74	76.73	68.61	92.21	71.85
PNM	66.91	64.41	83.84	78.27	102.47	80.16
PSEI	40.51	34.42	73.82	66.39	80.86	70.74
SCL	39.84	32.98	73.95	66.66	80.39	69.99
SRP	67.08	68.46	88.23	83.61	93.2	74.76
TEP	71.88	67.13	95.82	88.97	110.71	90.2
TIDC	72.28	70.84	100.14	94.15	136.32	112.73
TPWR	39.27	32.79	74.12	66.69	80.03	70.47

B. Balancing Test Failures

The CAISO performs the balancing test pursuant to Section 29.34(k) of the CAISO tariff. Powerex (BCHA) is not subject to the balancing test.

The table below shows the frequency that each WEIM entity passed the balancing test, as well as what percentage of balancing test failures were due to under-scheduling and over-scheduling, for each month within the quarter. Overall, the entities passed the balancing test at high frequencies throughout the quarter.

Table 10: Frequency of Passing Balancing Test

BAA	July 2022	August 2022	September 2022
AVA	99.19%	98.79%	99.31%
AZPS	99.60%	98.79%	99.44%
BANC	99.60%	99.73%	99.03%
BCHA	--	--	--
BPA	98.66%	99.06%	97.64%
IPCO	99.87%	99.46%	98.89%
LADWP	98.39%	99.33%	99.17%
NEVP	95.97%	97.71%	96.81%
NWMT	98.66%	98.52%	97.08%
PACE	98.79%	98.65%	98.33%
PACW	98.92%	99.06%	98.89%
PGE	98.79%	98.92%	99.03%
PNM	98.25%	98.38%	96.67%
PSEI	97.58%	97.04%	97.92%

SCL	99.60%	99.46%	99.86%
SRP	98.25%	96.77%	96.94%
TEP	98.12%	99.33%	98.33%
TIDC	99.60%	99.73%	99.86%
TPWR	99.33%	99.46%	99.72%

The table below shows the frequency of balancing test failures due to over-scheduling and under-scheduling respectively, for each month of the quarter. Overall, balancing test failures were more due to over-scheduling than under-scheduling.

Table 11: Frequency of Balancing Test Failures due to Over-Scheduling and Under-Scheduling

BAA	July 2022		August 2022		September 2022	
	Over-scheduling	Under-Scheduling	Over-scheduling	Under-Scheduling	Over-scheduling	Under-Scheduling
AVA	66.67%	33.33%	55.56%	44.44%	40.00%	60.00%
AZPS	33.33%	66.67%	11.11%	88.89%	75.00%	25.00%
BANC	33.33%	66.67%	50.00%	50.00%	14.29%	85.71%
BCHA	--	--	--	--	--	--
BPA	40.00%	60.00%	57.14%	42.86%	35.29%	64.71%
IPCO	--	100.00%	75.00%	25.00%	75.00%	25.00%
LADWP	91.67%	8.33%	80.00%	20.00%	50.00%	50.00%
NEVP	53.33%	46.67%	52.94%	47.06%	69.57%	30.43%
NWMT	50.00%	50.00%	45.45%	54.55%	71.43%	28.57%
PACE	55.56%	44.44%	60.00%	40.00%	33.33%	66.67%
PACW	37.50%	62.50%	28.57%	71.43%	37.50%	62.50%
PGE	11.11%	88.89%	62.50%	37.50%	71.43%	28.57%
PNM	69.23%	30.77%	66.67%	33.33%	62.50%	37.50%
PSEI	27.78%	72.22%	45.45%	54.55%	33.33%	66.67%
SCL	66.67%	33.33%	25.00%	75.00%	--	100.00%
SRP	30.77%	69.23%	25.00%	75.00%	68.18%	31.82%
TEP	64.29%	35.71%	40.00%	60.00%	83.33%	16.67%
TIDC	66.67%	33.33%	50.00%	50.00%	--	100.00%
TPWR	60.00%	40.00%	50.00%	50.00%	50.00%	50.00%

C. Flexible Ramp Sufficiency Test Failures

The table below shows the frequency that each WEIM entity passed the flexible ramping sufficiency test in the upward and downward directions, for each month within the quarter. Generally, the entities passed the flexible ramp sufficiency test very frequently throughout the months in the quarter.

Table 12: Frequency of Passing Flexible Ramping Sufficiency Test

BAA	July 2022		August 2022		September 2022	
	Upward Direction	Downward Direction	Upward Direction	Downward Direction	Upward Direction	Downward Direction
AVA	99.53%	100.00%	99.87%	100.00%	100.00%	99.90%
AZPS	99.97%	100.00%	99.93%	100.00%	100.00%	99.86%
BANC	100.00%	100.00%	100.00%	100.00%	99.69%	100.00%
BCHA	100.00%	100.00%	99.66%	99.87%	99.90%	99.93%
BPA	97.14%	100.00%	98.99%	99.97%	98.85%	99.65%
IPCO	99.83%	100.00%	99.80%	99.97%	99.55%	100.00%
LADWP	100.00%	100.00%	100.00%	100.00%	99.93%	100.00%
NEVP	100.00%	99.36%	99.90%	99.76%	99.86%	99.55%
NWMT	99.70%	99.80%	98.99%	100.00%	99.83%	100.00%
PACE	99.83%	100.00%	99.87%	100.00%	100.00%	100.00%
PACW	100.00%	99.46%	99.93%	100.00%	99.90%	100.00%
PGE	99.60%	100.00%	99.87%	100.00%	99.93%	100.00%
PNM	99.63%	99.97%	100.00%	99.97%	99.97%	99.79%
PSEI	99.56%	99.93%	99.76%	100.00%	99.72%	100.00%
SCL	99.80%	99.93%	99.97%	99.23%	99.76%	99.65%
SRP	99.36%	99.80%	98.86%	99.76%	99.41%	99.03%
TEP	100.00%	100.00%	100.00%	100.00%	99.62%	100.00%
TIDC	100.00%	99.90%	100.00%	99.93%	99.90%	100.00%
TPWR	99.97%	99.53%	99.93%	99.80%	99.86%	100.00%

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service list in the above-referenced proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California, this 20th day of October 2022.

/s/ Ariana Rebanco

Ariana Rebanco