



Updates to the 2032 ADS PCM—V2.0 to V2.1

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Updates in V2.1

PSCO Capacity Increase

PSCO submitted updated L&R resource list

| Generator Type | Number of Units | Total Capacity (MW) | Reason |
|---------------------|-----------------|---------------------|---------------------|
| Internal Combustion | 34 | 228 | Delayed Retirement |
| Gas Turbine | 13 | 707 | Delayed Retirement |
| Combined Cycle | 1 | 125 | Delayed Retirement |
| New Gas Turbine | 3 | 480 | Newly Planned Units |
| Totals: | 51 | 1,540 | |

CFE Resource Changes

- CFE confirmed that we should use the PF capacities:

| Number of Units | Previous Capacity | Updated Capacity | Change |
|-----------------|-------------------|------------------|--------|
| 25 | 1,491 MW | 1,636 MW | 145 MW |

- Reduced minimum up/down times

| Type of Generator | Previous up/down time (hrs.) | Updated up/down time (hrs.) | Number of affected units |
|-------------------|------------------------------|-----------------------------|--------------------------|
| Gas Turbine | 6/8 | 1/1 | 5 |
| Combined Cycle | 2/8 | 2/4 | 11 |

Hydro Updates

- BPA capacity updates (44 generators affected)
 - Previous capacity: 19,154 MW
 - Updated capacity: 20,495 MW
- Only California hydro able to spill
- Hydro dispatch prices (\$/MWh) applied as follows:
 - All units outside of California: -\$50
 - Except Core Columbia: -\$75
 - BANC, TIDC: -\$50
 - LDWP, IDD: -\$25
 - CISO: \$0

WECC Path Updates

- Deleted paths have been removed from the Path Rating Catalog
 - P22 Southwest to Four Corners
 - P23 Four Corners 345/500 Qualified Path
 - P50 Cholla-Pinnacle Peak
 - P51 Southern Navajo
- Monitor the following paths:
 - P14 Idaho to Northwest
 - P55 Brownlee East

Other Updates

- Generators added for Tracy pump loads and DC ties in PF
 - Modified the generator IDs in PCM
- Tracy pump loads turned off since being modeled as generators
- Other generator bus and IDs updated to match reference PF
 - One generator had bus updated
 - Ten generator IDs updated

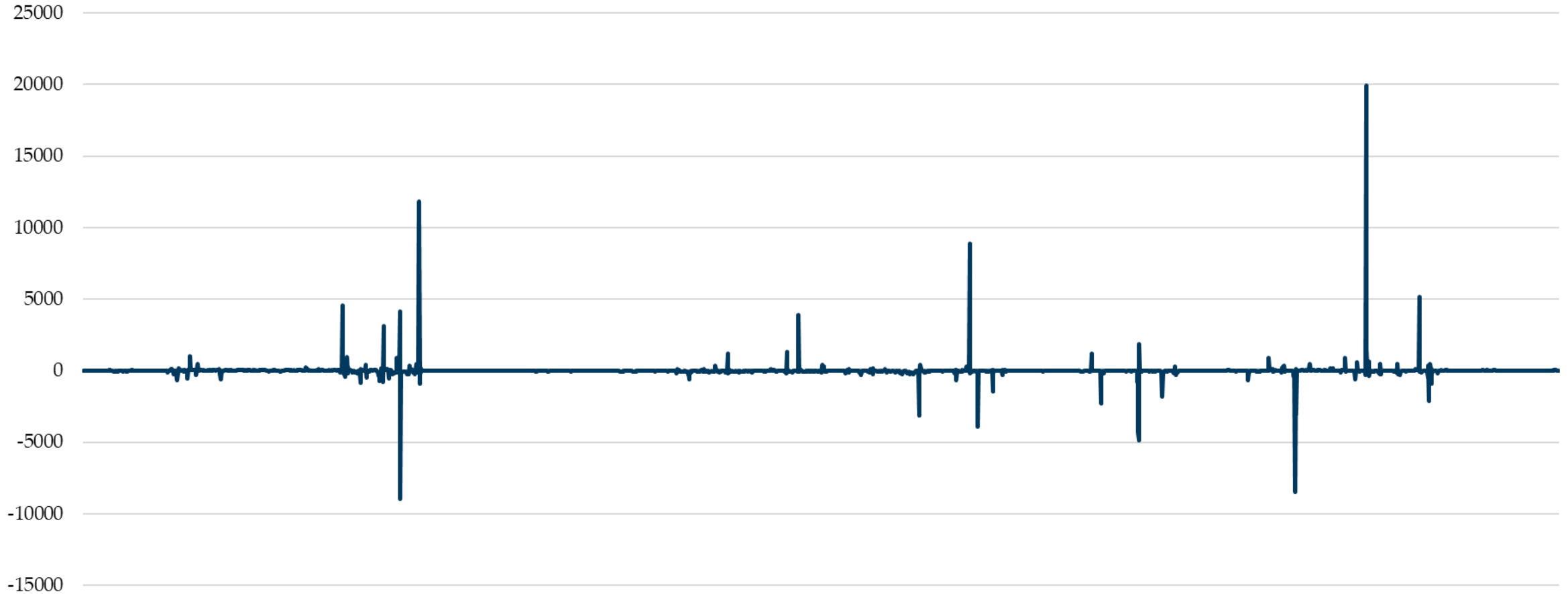
LMP Investigation

Maximum LMP by Area (\$/MWh)

| Area | LMP Load Weighted | LMP Gen Weighted | LMP Simple Average | Count >\$100 | Count >\$250 |
|-------|-------------------|------------------|--------------------|--------------|--------------|
| AESO | 303 | 299 | 299 | 1 | 1 |
| IPFE | 88 | 396 | 89 | 1 | 1 |
| IPMV | 179 | 108 | 167 | 146 | 0 |
| CFE | 487 | 486 | 487 | 6 | 6 |
| CIPB | 90 | 441 | 89 | 8 | 2 |
| CIPV | 106 | 83 | 86 | 101 | 0 |
| LDWP | 92 | 85 | 141 | 61 | 0 |
| PACW | 59 | 204 | 59 | 3 | 0 |
| WAUW | 85 | 19,930 | 93 | 95 | 41 |
| PSCO | 285 | 287 | 284 | 17 | 6 |
| WACM | 215 | 165 | 202 | 12 | 0 |
| EPE | 78 | 927 | 204 | 1,463 | 1,463 |
| TH_PV | 64 | 194 | 59 | 4 | 0 |

WAUW High Gen Weighted LMP

Avg LMP Weighted by Gen (\$/MWh) (April 1 – July 31)



What is happening in WAUW?

- No high LMP when looking at generator LMPs in output
- Used Analytical Tool for a single hour and nothing with large LMP contributions for WAUW

EPE High LMP

- Seems to be caused by congestion when looking at the Generator LMPs
- Occurring throughout year, but especially in summer when solar is going off-line

EPE Generator Nomogram

- Checked EPE generation balance nomogram; not all EPE generators were included
 - Change case created
 - Ran case for July–September
 - Reduced nomogram congestion for those months
 - Still have high LMPs (may be caused by nomogram)
- Running new sensitivity not monitoring the nomogram

Basic Definition

Name: Monitored

Limit for Commitment*:

Limit for Disptach*:

Penalty for Commitment*:

Penalty for Disptach*:

Notes:

LMPCalculationFlag

List of nomogram items:

| Name | Type | Coefficient |
|-------------------------------|-------------|---------------|
| DG-BTM_EPE_TX_EI Paso | Generator | -1 |
| DG-BTM_EPE_TX_Hudspeth | Generator | -1 |
| DR_EPE-2 | Generator | -1 |
| EPE | Area | 0.8535 |
| Hatch_Solar_EC | Generator | -1 |
| HECATE | Generator | -1 |
| Holloman Solar Facility_LandR | Generator | -1 |
| Montana_1_G1 | Generator | -1 |
| Montana_2_G2 | Generator | -1 |
| Montana_3_G3 | Generator | -1 |
| Montana_4_G4 | Generator | -1 |
| MS_G1 | Generator | -1 |
| MS_G2 | Generator | -1 |
| Newman CC5a | Generator | -1 |
| Newman CC5b | Generator | -1 |
| Newman CC7 | Generator | -1 |
| Newman_6GT5 | Generator | -1 |



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