

Summary of Compliance with Integrated Resource Planning (IRP) Order D.19-11-016 and Mid Term Reliability (MTR) D.21-06-035 Procurement

August 2023 Data Filings
Energy Division Staff Findings

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California Public
Utilities Commission

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Executive Summary (for August 2023 Data)

- All Load Serving Entities (LSEs) subject to D.19-11-016 and Mid Term Reliability D.21-06-035 procurement obligations submitted timely compliance information as required in D.20-12-044.
 - CPUC Staff have validated that collectively LSEs have procured 3,466 MW of total procurement toward D.19-11-016, 166 MW above of the 3,300 MW obligation.
 - CPUC Staff have validated that collectively LSEs have brought online MWs beyond the 2,000 MW NQC necessary to be online for MTR Tranche 1.
 - Most LSEs have started conducting procurement towards later MTR Tranches.
 - LSE-specific compliance is not contained in this public report. While an LSE type may have procured sufficiently as a collective, individual LSEs may still have deficiencies.

IRP Procurement Orders and Compliance Review Schedule

Table 1. CPUC Procurement Orders (MW NQC)

| CPUC Orders | Total | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|--|------------------|-------------------|-----------------|-------------------|--------------------|---------------------------------|--------------------|--------------------|--------------------|
| D.19-11-016 Applies to 25 LSEs since 18/43 LSEs opted out. | 3,300 MW | 1,650 MW by Aug 1 | 825 MW by Aug 1 | 825 MW by Aug 1 | n/a | n/a | n/a | n/a | n/a |
| D.21-06-035 (MTR) Applies to all CPUC-jurisdictional LSEs. No opt-outs allowed. | 11,500 MW | n/a | n/a | 2,000 MW by Aug 1 | 6,000 MW by June 1 | 1,500 MW ¹ by June 1 | n/a ² | n/a | 2,000 MW by June 1 |
| D.23-02-040 (Supplemental MTR) Applies to all CPUC-jurisdictional LSEs. No opt-outs allowed. | 4,000 MW | n/a | n/a | n/a | n/a | n/a | 2,000 MW by June 1 | 2,000 MW by June 1 | n/a |
| Cumulative Procurement Ordered | 18,800 MW | 1,650 MW | 2,475 MW | 5,300 MW | 11,300 MW | 12,800 MW | 14,800 MW | 16,800 MW | 18,800 MW |

Table 2. CPUC Review of LSE Contracting Progress

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|--|---------------|---------------|--------------------------------|----------------|----------------|----------------|----------------|----------------|
| CPUC Reviews LSE Compliance Filings and CPUC could order Backstop Procurement | February 2021 | February 2022 | February 2023 & December 2 023 | December 2 024 | December 2 025 | December 2 026 | December 2 027 | December 2 028 |
| CPUC Reviews LSE Compliance Filings only | August 2021 | August 2022 | August 2023 ³ | June 2024 | June 2025 | June 2026 | June 2027 | June 2028 |

(1) D.21-06-035 required 2,500 of the 9,000 MW required between 2023-2025 be "Diablo-Canyon Replacement".
 (2) D.21-06-035 required 2,000 MW of Long-Lead Time Procurement by 2026, with an option to extend to 2028: 1,000 MW of long-duration storage and 1,000 MW of firm zero-emitting. D.23-02-040 automatically extends the procurement obligation to 2028.
 (3) In August 2023, the Commission can order back stop for the for remaining D.19-11-016 procurement obligations.
 (4) In D.24-02-047 the Commission allowed for extension requests to be filed for LLT procurement. LSEs that request extensions must procure additional generic or bridge resources until their LLT resources come
 California Public Utilities Commission

Milestone Requirements

- **Milestone 1:** a signed contract with a resource developer for provision of commercial technology, an interconnection agreement with a demonstrated path toward deliverability by the required online date, signed land leases or title deeds demonstrating project site control, and a project timeline. This milestone may also show intended procurement from demand response resources, as well as allowable imports.
- **Milestone 2:** a showing of a “notice to proceed” or similar contractual evidence of construction commencement for new construction projects, as well as executed contracts for demand response, imports, or sales of excess resources between LSEs.
- **Milestone 3:** evidence of a project being online and capable of delivering energy, or in the case of demand response, load reduction.

Criteria for Ordering Backstop Procurement

D. 20-12-044 directed that CPUC Staff are to evaluate the need for backstop procurement to be required by the CPUC based on progress towards Milestones 1 and 2 for the year in which the capacity is required to come online by August 1.

Resource-Specific Considerations:

Whether there is complete contract failure or delay

- Length of delay estimated
- Whether a project has failed to meet multiple milestones
- Whether the delay is related to interconnection or transmission
- Project stage of development
- Quality of LSE or developer remediation plan (including diagnosis for the delay/failure and achievable mitigation steps, backed up by evidence)

LSE-Specific Considerations:

- Pattern of success in meeting previous milestones
- Quality of mitigation or remediation plan
- Thoroughness of documentation

D.19-11-016 Background

Background on D.19-11-016

- The CPUC ordered Load Serving Entities (LSEs) to procure 3,300 MW of new resources by August 1, 2023, in November 2019 via an order in the Integrated Resource Planning (IRP) proceeding, D.19-11-016.
- The CPUC established reporting requirements on this LSE procurement and outlined procedures for the need for backstop procurement in D.20-12-044.
- The LSEs submitted compliance filings in August 2023 in compliance with these orders – this is the data we are currently analyzing for this report.
- The procurement obligations for D.19-11-016 are divided into three tranches, one each for years 2021, 2022, and 2023.
- LSEs were required to report on procurement efforts twice per year, in February and August.
- While August 2023 should have been the last filing for D.19-11-016, we are requesting LSEs to continue reporting on any delayed D.19-11-016 projects until they come online.

Procurement Obligations and Opt-Outs by LSE

| Opt-Out Status | Tranche 1 Requirement (8/1/2021) | Tranche 2 Requirement (8/1/2022) | Tranche 3 Requirement (8/1/2023) | Adjusted Obligation |
|------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------|
| No (22 CCAs & ESPs) | 496 | 248 | 248 | 992 |
| Yes (18 CCAs & ESPs) | | | | |
| 3 IOUs | 1,154 | 577 | 577 | 2,308 |
| Total - 43 LSEs | 1,650 | 825 | 825 | 3,300 |

- **D.19-11-016 established a procurement obligation on all LSEs; however, it allowed LSEs to opt-out of the obligation.**
 - **No Opt-Out:** 22 CCAs and ESPs did not opt-out of IRP Procurement Obligations.
 - **Yes Opt-Out:** 18 CCAs and ESPs did not receive an obligation or opted-out (knowing that the 3 IOUs would be then obligated to procure on their behalf and the costs charged to the opt-outs).
 - **IOUs:** IOUs received procurement obligations for their own load and the 18 LSEs that opted-out or did not receive an obligation.

Requirements by Tranche by LSE

- Each LSE has a unique procurement obligation for each tranche.
- 25 LSEs submitted information related to all their procurement obligations.
- The adjusted obligation column shows the IOUs procurement obligations for their own load and the 18 LSE that did not receive an obligation or opt-out.

| Opt-Out Status | Reporting LSE Full Name | LSE | Tranche 1 Requirement (8/1/2021) | Tranche 2 Requirement (8/1/2022) | Tranche 3 Requirement (8/1/2023) | Adjusted Obligation | |
|---|---|------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------|--|
| No | Apple Valley Choice Energy | AVCE | 1.9 | 1.0 | 1.0 | 3.8 | |
| | Clean Power Alliance of Southern California | CPASC | 98.5 | 49.2 | 49.2 | 196.9 | |
| | Clean Power San Francisco | CPSF | 28.5 | 14.3 | 14.3 | 57.0 | |
| | Direct Energy, L.L.C. | DEB | | | | | |
| | East Bay Community Energy | EBCE | 49.8 | 24.9 | 24.9 | 99.6 | |
| | Lancaster Clean Energy | LCE | 4.7 | 2.4 | 2.4 | 9.4 | |
| | Marin Clean Energy | MCE | 43.8 | 21.9 | 21.9 | 87.5 | |
| | Monterey Bay Community Power Authority | MBCPA | 28.7 | 14.4 | 14.4 | 57.4 | |
| | Peninsula Clean Energy | PCEA | 27.5 | 13.8 | 13.8 | 55.0 | |
| | Pico Rivera Innovative Municipal Energy | PRIME | 1.3 | 0.7 | 0.7 | 2.6 | |
| | Pioneer Community Energy | PIONEER | 9.3 | 4.6 | 4.6 | 18.5 | |
| | Rancho Mirage Energy Authority | RMEA | 2.4 | 1.2 | 1.2 | 4.8 | |
| | Redwood Cost Energy Authority | RCEA | 5.4 | 2.7 | 2.7 | 10.7 | |
| | San Jacinto Power | SJP | 1.4 | 0.7 | 0.7 | 2.8 | |
| | San Jose Clean Energy | SJCE | 38.8 | 19.4 | 19.4 | 77.6 | |
| | Shell Energy North America | SENA | | | | | |
| | Silicon Valley Clean Energy | SVCEA | 33.6 | 16.8 | 16.8 | 67.2 | |
| | Sonoma Clean Power | SOMA | 21.7 | 10.8 | 10.8 | 43.3 | |
| | UC Office of the President | UCOP | | | | | |
| | Valley Clean Energy Alliance | VCEA | 6.3 | 3.2 | 3.2 | 12.6 | |
| | Calpine Energy Solutions | NES | | | | | |
| | Calpine Power America-CA, L.L.C. (1362) | CPA | | | | | |
| | Yes | 3 Phases Energy Services | 3PR | | | | |
| | | American PowerNet Management | APN | | | | |
| | | Baldwin Park, City of | COBP | | | | |
| City of Solana Beach | | COSB | | | | | |
| Clean Energy Alliance | | CEA | | | | | |
| Commerce Energy, Inc. (1092) | | CEI | | | | | |
| Commerce, City of | | COM | | | | | |
| Commercial Energy of California | | CES | | | | | |
| Constellation New Energy, Inc. | | CNE | | | | | |
| Desert Community Energy | | DCE | | | | | |
| EDF Industrial Power Services (CA), LLC | | EIPS | | | | | |
| King City Community Power | | KCCP | | | | | |
| Pilot Power Group, Inc. | | PPG | | | | | |
| Pomona, City of | | POMONA | | | | | |
| San Diego Community Power | | SDCP | | | | | |
| Santa Barbara Clean Energy | | SBCE | | | | | |
| Tiger Natural Gas | | TNG | | | | | |
| Western Community Energy | | WCE | | | | | |
| IOU | PG&E | PGE | 382.6 | 191.3 | 191.3 | 765.1 | |
| | SCE | SCE | 620.7 | 310.3 | 310.3 | 1,241.3 | |
| | SDG&E | SDGE | 150.7 | 75.3 | 75.3 | 301.3 | |
| Grand Total | | | 1,650 | 825 | 825 | 3,300 | |

Progress Towards D.19-11-016 Procurement Requirements Reported by LSEs in Their August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC by LSE Type and Tranche

Notes about Tables

- All tables are reported in Net Qualifying Capacity (NQC) values.
- These tables only include procurement pursuant to D.19-11-016.
- D.21-06-035 Mid-Term Reliability (MTR) procurement is shown separately, but the combination of these tables still does not constitute all procurement activity, since LSEs also procure for other purposes (i.e., to meet RPS requirements, storage mandates, Resource Adequacy, individual portfolio needs, etc.).
- These tables are current as of the 8/1/2023 filing date, including subsequent communications with CPUC Staff, but they have not been updated based on post 8/1/2023 Procurement Status Data reports.
- All data displayed online reflects LSE-reported information as of 8/1/2023, and all subsequent dates represent forecasts relative to the date of submission

D.19-11-016 Final Compliance Verification

- To validate the final compliance of LSEs' for D.19-11-016, CPUC Staff completed a rigorous check of each projects' milestones for completeness and compliance.
 - CPUC Staff contacted LSEs regarding missing documentation that would impact CPUC Staffs' ability to verify a project.
 - Final validation was completed for all tranches of D.19-11-016.

D.19-11-016 CPUC Staff Verified Procurement Reported by LSE Type

| LSE Type | Total D.19-11-016 Obligation | CPUC Staff Verified Online by 8/1/2023 | D.19-11-016 Total Excess or Shortfall |
|--------------|------------------------------|--|---------------------------------------|
| IOU | 2,308 | 2,189 | -119 |
| CCA | 807 | 1,080 | 273 |
| ESP | 186 | 197 | 11 |
| Total | 3,300 | 3,466 | 166 |

- CPUC Staff have validated that collectively LSEs have procured 3,466MW of total procurement toward D.19-11-016, 165 MW above of the 3,300 MW obligation.
 - IOUs reported –119 MWs deficiency with some projected forecasted to come online after 8/1/2023.
 - In CPUC Staff review of the 12/1/2023 Compliance Filings, CPUC Staff have validated that sufficient IOUs delayed resources came online in 2023 to complete D.19-11-016 requirements.
 - Individual LSE Compliance with D.19-11-016 is confidential in many cases and not included in this public report. While an LSE type may have procured sufficiently as a collective, individual LSEs may still have deficiencies.

D.19-11-016 CPUC Staff Verified Procurement Reported by Resource Type

| Resource Type | CPUC Staff Verified Online by 8/1/2023 |
|--------------------|--|
| Battery | 1,562 |
| Biomass | 3 |
| Geothermal Storage | 60 |
| DR | 39 |
| Solar | 154 |
| Hybrid | 1,177 |
| Thermal | 295 |
| Wind | 167 |
| Total | 3,466 |

- The vast majority of procurement is either Hybrid resources (solar+battery) or standalone batteries.

D.19-11-016 Takeaways

- CPUC Staff have validated that collectively LSEs have procured 3,466 MW of total procurement toward D.19-11-016, 166 MW above of the 3,300 MW obligation.
- The IOUs reported a 119 MW deficiency towards their D.19-11-016 obligation.
 - In CPUC Staff review of the 12/1/2023 Compliance Filings, CPUC Staff have validated that IOUs delayed resources came online in 2023.
- LSE-specific compliance is not contained in this public report. While an LSE type may have procured sufficiently as a collective, individual LSEs may still have deficiencies.

Mid-Term Reliability Background

D.21-06-035 (MTR) and D.23-02-040 (Supplemental MTR)

MTR Background

- The CPUC ordered LSEs to procure 11,500 MW of new resources between August 2023 and June 2026 via an order in the IRP proceeding, D.21-06-035.
- LSEs submitted compliance filings in August 2023 in compliance with this order. LSEs will continue to file twice per year (LSEs also filed December 2023, so there were 3 filings in 2023 only).
- The procurement obligations for D.21-06-035 are both annual and delineated by procurement category.
- All procurement must be clean, and specifically, at least:
 - 2,500 MW must be from zero-emitting generation, generation paired with storage, or demand response resources for Diablo Canyon Replacement (DCR).
 - 1,000 MW must be from firm zero-emitting clean resources (Firm ZE).
 - An additional 1,000 MW must be from long-duration energy storage (LDES).
- MTR differs from the D.19-11-016 obligations in the significant respect that:
 - There was no ability to Opt-Out of procurement obligations (the CCAs and ESPs that opted out for D.19-11-016 have obligations for this procurement order).
 - There are penalty for non-compliance provisions for an LSE's failure to procure (in addition to potential backstop procurement).

MTR Background (cont.)

- In March 2023, the CPUC issued D.23-02-004 which ordered 4,000 MW NQC of new procurement (supplemental MTR) in 2026 and 2027, in addition to the 11,500 MQ NQC ordered in D.21-06-035 (MTR):
 - D.23-02-004 requires the procurement to be clean and otherwise follow all the rules and requirements of D. 21-06-035.
 - LSE obligation allocation were updated from the MTR order to be based on percent of load share at the time of the decision.
 - This Decision also recognizes the difficulties in procuring long lead-time resources by 2026, as required by D. 21-06-035, and automatically extends those deadlines to 2028.
 - This Decision also makes changes to existing compliance rules set in previous IRP Proceeding Decisions, including (but not limited to):
 - Creating a process for resources included on the baseline of either D. 19-11-016 or D. 21-06-035 that have not yet come online to be removed from the baseline and allowed to count as new procurement if the LSE agrees to bring online an equal amount of NQC procurement in the year 2025.
 - Allowing additional flexibility for projects that would serve as “bridge” resources when an LSE wants to insure against the risk of project delay.
 -

Baseline Swap and Compliance Trade Requests

- On August 11, 2023, CPUC Staff posted an updated instructions and templates for IRP procurement baseline swap processes.
 - The document is available on the IRP Procurement Track Website [here](#).
 - CPUC Staff have processed a number of baseline swap requests that have come in by Advice Letter.
 - Some swaps that have come in via compliance filing have also been granted.
- Separately, CPUC Staff have also approved one compliance trade between CPA and NES.
- CPUC Staff will publish updates to the MTR Baseline List and the MTR/ Supplemental MTR obligations list for all changes that are not confidential.

MTR Requirements Summary

| Mid-Term Reliability (MTR) Procurement Requirements by Tranche and Category (NQC MW) | | | | | | | | |
|--|---|--------------------|--------------|--------------|--------------|--------------|--------------|---------------|
| | Procurement Category | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
| a | Total MTR Required Procurement by Year | 2,000 | 6,000 | 1,500 | 2,000 | 2,000 | 2,000 | 15,500 |
| b | Diablo Canyon Replacement (DCR) | ←———— 2,500 —————→ | | | | | | 2,500 |
| c | Other/ General Procurement ² | ←———— 7,000 —————→ | | | 2,000 | 2,000 | | 11,000 |
| d | Long Lead-Time - Long-Duration Storage | | | | | | 1,000 | 1,000 |
| e | Long Lead-Time - Firm Zero-Emitting | | | | | | 1,000 | 1,000 |
| = b + c + d + e | Total MTR Procurement | 9,500 | | | 2,000 | 2,000 | 2,000 | 15,500 |

For the purpose of this presentation the following procurement obligation years are labeled as:
 2023: Tranche 1 2026: Tranche 4
 2024: Tranche 2 2027: Tranche 5
 2025: Tranche 3 2028: Long Duration Storage: Tranche 6 LDES
 2028: Firm Zero-Emitting: Tranche 6 Firm ZE

[1] The 2,500 MW shown in row "b" represents the portion of procurement shown in row "a" for 2023-2025 that is for the Diablo Canyon Replacement procurement obligation.
 [2] The 7,000 MW shown in row "c" represents the portion of procurement shown in row "a" for 2023-2025 that is for the other/general procurement obligation.
 [3] In D.24-02-047 the Commission allowed for extension requests to be filed for LLT procurement. LSEs that request extensions must procure additional generic or bridge resources until their LLT resources come online

MTR Requirements by Tranche by LSE

| LSE Type | LSE | MTR (D.21-06-035) | | | | | | Supplemental MTR (D.23-02-04) | | | Total MTR and Supplemental MTR By 2028 |
|--------------|----------|-------------------|--------------|--------------|--------------|--|---------------|-------------------------------|--------------|------------------------|--|
| | | 2023 | 2024 | 2025 | 2028 (LLT)* | DCR Minimum zero-emitting capacity by 2025 | MTR Total | 2026 | 2027 | Supplemental MTR Total | |
| CCA | AVCE | 3 | 8 | 2 | 3 | 3 | 16 | 3 | 3 | 6 | 22 |
| | CCCE | 51 | 152 | 38 | 51 | 63 | 292 | 55 | 55 | 110 | 402 |
| | CEA | 7 | 20 | 5 | 7 | 8 | 39 | 14 | 14 | 28 | 67 |
| | CPASC | 118 | 354 | 89 | 118 | 148 | 679 | 117 | 117 | 234 | 913 |
| | CPSF | 31 | 93 | 23 | 31 | 39 | 178 | 31 | 31 | 62 | 240 |
| | DCE | 6 | 18 | 4 | 6 | 7 | 34 | 4 | 4 | 8 | 42 |
| | EBCE | 73 | 218 | 55 | 73 | 91 | 419 | 68 | 68 | 136 | 555 |
| | KCCP | 0.3 | 1 | 0.3 | 0.3 | 0.4 | 2 | 0.4 | 0.4 | 0.8 | 3 |
| | LCE | 6 | 19 | 5 | 6 | 8 | 36 | 7 | 7 | 14 | 50 |
| | MCE | 58 | 173 | 43 | 58 | 72 | 332 | 61 | 61 | 122 | 454 |
| | OCPA | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 38 | 76 | 76 |
| | PALMDALE | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 12 | 12 |
| | PCEA | 38 | 113 | 28 | 38 | 47 | 217 | 35 | 35 | 70 | 287 |
| | PIONEER | 12 | 37 | 9 | 12 | 15 | 70 | 19 | 19 | 38 | 108 |
| | POMONA | 5 | 14 | 3 | 5 | 6 | 27 | 4 | 4 | 8 | 35 |
| | PRIME | 2 | 7 | 2 | 2 | 3 | 13 | 2 | 2 | 4 | 17 |
| | RCEA | 7 | 20 | 5 | 7 | 8 | 39 | 7 | 7 | 14 | 53 |
| | RMEA | 3 | 9 | 2 | 3 | 4 | 17 | 3 | 3 | 6 | 23 |
| | SBCE | 2 | 7 | 2 | 2 | 3 | 13 | 4 | 4 | 8 | 21 |
| | SDCP | 80 | 237 | 60 | 80 | 99 | 456 | 80 | 80 | 160 | 616 |
| SJCE | 43 | 129 | 32 | 43 | 54 | 247 | 40 | 40 | 80 | 327 | |
| SJP | 2 | 5 | 1 | 2 | 2 | 10 | 2 | 2 | 4 | 14 | |
| SOMA | 25 | 74 | 18 | 25 | 31 | 142 | 23 | 23 | 46 | 188 | |
| SVCE | 41 | 124 | 31 | 41 | 52 | 237 | 40 | 40 | 80 | 317 | |
| VCEA | 8 | 23 | 6 | 8 | 10 | 45 | 8 | 8 | 16 | 61 | |
| ESP | 3PR | | | | | | | | | | |
| | CES | | | | | | | | | | |
| | CNE | | | | | | | | | | |
| | CPA | | | | | | | | | | |
| | DEB | | | | | | | | | | |
| | EIPS | | | | | | | | | | |
| | NES | | | | | | | | | | |
| | PPG | | | | | | | | | | |
| | SENA | | | | | | | | | | |
| | UCOP | | | | | | | | | | |
| IOU | PGE | 400 | 1,201 | 300 | 400 | 500 | 2,301 | 388 | 388 | 776 | 3,077 |
| | SCE | 705 | 2,114 | 529 | 705 | 880 | 4,053 | 684 | 684 | 1,367 | 5,420 |
| | SDGE | 83 | 248 | 62 | 83 | 103 | 475 | 72 | 72 | 144 | 619 |
| Total | | 2,000 | 6,000 | 1,500 | 2,000 | 2,500 | 11,500 | 2,000 | 2,000 | 4,000 | 15,500 |

*The LLT resource requirements are divided into half from long-duration storage and half from firm, zero-emitting generation resources. LSEs with an odd-numbered procurement obligation may choose how to round their obligation in whatever way results in the total capacity in this column of the table being delivered. Per D.23-02-04 LLT resources obligation date has been moved to 2028.

Progress Towards MTR Procurement Reported by LSEs in Their August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC by LSE Type and Tranche

Notes about Tables

- The following data is reported in NQC and uses calculation methodologies specified in the MTR decision. All NQC used in slides 25-45 are MTR-NQC values, which are discounted relative to the more common NQC used for Resource Adequacy compliance.
 - The tables also include some manual data fixes by CPUC Staff.
- The data shows LSEs' compliance towards Tranche 1 that has been verified by staff review of milestone documentation.
- The data tables for general procurement towards Tranche 1-5 (2023-2027) is inclusive of Diablo Canyon Replacement Procurement

Progress Towards MTR Tranche 1 Procurement Reported by LSEs in Their August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC by LSE Type
and Tranche

MTR Tranche 1 Procurement Reported by LSE Type

| LSE Type | MTR Tranche 1 Obligation | CPUC Staff Verified Online by 8/1/2023 | MTR Tranche 1 Excess or Shortfall |
|--------------|--------------------------|--|-----------------------------------|
| IOU | 1,188 | 1,602 | 414 |
| CCA | 621 | 936 | 316 |
| ESP | 193 | 440 | 247 |
| Total | 2,000 | 2,978 | 997 |

- CPUC staff have validated that collectively LSEs have procured 2,978 MW of MTR Tranche 1 procurement, ~1,000 MW above the 2,000 MW obligation
 - Note this includes LSE procurement that has come on early for later MTR tranches

MTR Tranche 1 Procurement Reported by Resource Type

| Resource Type | CPUC Staff Verified Online by 8/1/2023 |
|---------------|--|
| Battery | 1,161 |
| DR | 33 |
| Geothermal | 26 |
| Solar | 39 |
| Hybrid | 1,117 |
| Other | 387 |
| Wind | 215 |
| Total | 2,978 |

- The “other” resource type category contains mostly bridge resources including unspecified imports.
- The vast majority of procurement is either Hybrid resources (solar+battery) or standalone batteries.
- Note this includes LSE procurement that has come on early for later MTR tranches

MTR Tranche 1 Procurement Takeaways

- As of the 8/1/2023 IRP Compliance Filing data, CPUC Staff have validated that collectively LSEs have brought online MWs beyond the 2,000 MW NQC necessary to be online for Tranche 1.
- This data is inclusive of LSE procurement that has come online early for later MTR tranches, inflating the value beyond procurement just for Tranche 1 compliance.
- Individual LSE Compliance with MTR Tranche 1 is confidential in many cases and not included in this public report. Similarly, while an LSE type may have collectively procured sufficient resources, individual LSEs within that LSE type may still have deficiencies.

Forecasted Progress Towards 2024-2027 MTR Tranche 2,3,4, and 5 Procurement Reported by LSEs in Their August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC by LSE Type
and Tranche

Notes about Tables

- The following data is reported in NQC and uses calculation methodologies specified in the MTR decision.
 - The tables also include some manual data fixes by CPUC Staff.
- The data tables for general procurement towards Tranche 1-5 (2023-2027) is inclusive of Diablo Canyon Replacement Procurement.
- Data included in the tables are self-reported. Actual project online dates may not exactly align with LSE-reported tranches:
 - Based on MTR ELCC methodology and LSE progress towards earlier Tranches, an LSE may report a project towards a later tranche even if it has an earlier online and thus use the later tranches ELCC values.
 - Some LSEs reported in a tranche earlier than the online date if the projects COD was delayed pasted the tranche due date, but the LSE still intended for it to be counted towards an earlier tranche. These projects will be assessed by CPUC Staff on a case-by-case basis.

2024 Forecasted MTR Tranche 2 Procurement Reported by LSE Type

| LSE Type | Cumulative MTR Tranche 2 Obligation | Forecasted MTR 2024 Online by 6/1/2024 | Forecasted MTR Tranche 2 Excess or Shortfall |
|--------------|-------------------------------------|--|---|
| IOU | 4,750 | 4,322 | -429 |
| CCA | 2,476 | 2,914 | 438 |
| ESP | 773 | 627 | -147 |
| Total | 8,000 | 7,863 | -137 |

- As of the 8/1/2023 Compliance filings, LSEs are forecast to be collectively deficient for 2024 MTR Tranche 2 by 137 MW.
- CCAs are collectively forecasting sufficient procurement towards Tranche 2.

[Note: these are LSE reported MWs and not validated by CPUC Staff.]

2024 MTR Tranche 2 Procurement Reported by Resource Type

| Resource Type | Forecasted MTR 2024 Online by 6/1/2024 |
|---------------------|--|
| Battery | 3,420 |
| DR | 43 |
| Geothermal | 26 |
| Solar | 39 |
| Hybrid | 3,719 |
| Unspecified Imports | 387 |
| Wind | 229 |
| Total | 7,863 |

- The “unspecified imports” resource type category shows bridge resources.
- The vast majority of procurement is either Hybrid resources (solar+battery) or standalone batteries.
- Note this includes LSE procurement that has come on early for later MTR tranches

2025 Forecasted MTR Tranche 3 Procurement Reported by LSE Type

| LSE Type | Cumulative MTR Tranche 3 Obligation | Forecasted MTR 2025 Online by 6/1/2025 | Forecasted MTR Tranche 3 Excess or Shortfall |
|--------------|-------------------------------------|--|---|
| IOU | 5,642 | 5,722 | 81 |
| CCA | 2,939 | 3,952 | 1,013 |
| ESP | 919 | 639 | -280 |
| Total | 9,500 | 10,314 | 815 |

As of the 8/1/2023 Compliance filings, collectively LSEs forecast to exceed for 2025 MTR Tranche 3 by 815 MW.

[Note: these are LSE reported MWs and not validated by CPUC Staff.]

2026 Forecasted MTR Tranche 4 Procurement Reported by LSE Type

| LSE Type | Cumulative MTR Tranche 4 Obligation | Forecasted MTR 2025 Online by 6/1/2026 | Forecasted MTR Tranche 4 Excess or Shortfall |
|--------------|-------------------------------------|--|---|
| IOU | 6,785 | 5,859 | -927 |
| CCA | 3,610 | 4,365 | 754 |
| ESP | 1,104 | 706 | -398 |
| Total | 11,500 | 10,930 | -570 |

- As of the 8/1/2023 Compliance filings, collectively LSEs forecast to be deficient for 2026 MTR Tranche 4 by 570 MW.

[Note: this data was collected 6 months after the Supplemental MTR order, so LSEs procurement is still expected to be in early stages. Also, these are LSE reported MWs and not validated by CPUC Staff.]

2027 Forecasted MTR Tranche 5 Procurement Reported by LSE Type

| LSE Type | Cumulative MTR Tranche 5 Obligation | Forecasted MTR 2025 Online by 6/1/2027 | Forecasted MTR Tranche 5 Excess or Shortfall |
|--------------|-------------------------------------|--|---|
| IOU | 7,929 | 5,859 | -2,070 |
| CCA | 4,282 | 4,486 | 205 |
| ESP | 1,289 | 706 | -583 |
| Total | 13,500 | 11,052 | -2,448 |

- As of the 8/1/2023 Compliance filings, collectively, LSEs forecast to be deficient for 2027 MTR Tranche 5 by 2,448 MW.

[Note: this data was collected 6 months after the Supplemental MTR order, so LSEs procurement is still expected to be in early stages. Also, these are LSE reported MWs and not validated by CPUC Staff.]

Forecasted Progress Towards Diablo Canyon Replacement Procurement Reported by LSEs in the August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC by LSE Type and Tranche

2025 Forecasted Diablo Canyon Replacement Procurement Reported by LSE Type

| LSE Type | Cumulative MTR Tranche 5 Obligation | Forecasted MTR 2025 Online by 6/1/2025 | Forecasted MTR Tranche 5 Excess or Shortfall |
|--------------|-------------------------------------|--|---|
| IOU | 1,483 | 105 | -1378 |
| CCA | 773 | 561 | -213 |
| ESP | 242 | 117 | -125 |
| Total | 2,500 | 783 | -1,715 |

- As of the 8/1/2023 Compliance filings, collectively, LSEs are forecast to be deficient for Diablo Canyon Replacement by 1,715 MW
- LSEs' progress towards Diablo Canyon Replacement is pending the necessary compliance documentation verification to be filed by 2/1/2025.

[Note: these are LSE reported MWs and not validated by CPUC Staff and only track capacity not energy procurement, which is also required for Diablo Canyon Replacement.]

Summary of Tranche 2-4 and Diablo Canyon Replacement Procurement Reported by LSEs in the August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC by LSE Type and Tranche

Forecasted MTR Procurement Progress

- As of the 8/1/2023 Compliance filings, collectively LSEs forecasted procurement shows:

| Tranche | IOU | CCA | ESP |
|---------------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 2023 Tranche 1 | Sufficient procurement progress | Sufficient procurement progress | Sufficient procurement progress |
| 2024 Tranche 2 | Deficient procurement progress | Sufficient procurement progress | Deficient procurement progress |
| 2025 Tranche 3 | Sufficient procurement progress | Sufficient procurement progress | Deficient procurement progress |
| 2025 Diablo Canyon Replacement | Deficient procurement progress | Deficient procurement progress | Deficient procurement progress |
| 2026 Tranche 4 | Deficient procurement progress | Sufficient procurement progress | Deficient procurement progress |
| 2027 Tranche 5 | Deficient procurement progress | Sufficient procurement progress | Deficient procurement progress |

MTR Procurement Replacement Takeaways

- As of the 8/1/2023 Compliance filings:
 - Most LSEs have begun conducting MTR procurement.
 - Procurement progress is evident and/or forecasted for all Tranches and Diablo Canyon Procurement.
 - Progress towards Diablo Canyon Replacement Firm Zero Emitting is pending the necessary compliance documentation verification to be filed by 2/1/2025.

Note: Deficient procurement forecasts for MTR do not necessarily indicate a need for backstop procurement, as procurement efforts are still underway.

Forecasted Progress Towards MTR LLT Procurement Reported by LSE and Resource Type in LSEs' August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC

Forecasted LLT Procurement Reported by Resource Type

| LSE Type | D.21 2028 LDES | | | D.21 2028 FIRM ZE | | | LLT Total | | |
|--------------|----------------|---------|--------------------|-------------------|---------|-------------------|------------|---------|-------------------|
| | Obligation | Claimed | Excess / Shortfall | Obligation | Claimed | Excess/ Shortfall | Obligation | Claimed | Excess/ Shortfall |
| CCA | 310 | 361 | 51 | 310 | 270 | -40 | 621 | 631 | 10 |
| ESP | 97 | 0 | -97 | 97 | 0 | -97 | 193 | 0 | -193 |
| IOU | 594 | 0 | -594 | 594 | 0 | -594 | 1,188 | 0 | -1,188 |
| Total | 1,000 | 361 | -639 | 1,000 | 270 | -730 | 2,000 | 631 | -1,369 |

- Collectively the LSEs reported to **under procure** for both LLT resource categories.
 - CCAs are the only LSEs to have reported procurement.
 - IOUs and ESPs have not reported procurement towards LLT.

Forecasted LLT Procurement Reported by Resource Type

| LLT Category | Resource Type | Forecasted LLT Procurement |
|--------------|---------------|----------------------------|
| LDES | Battery | 361 |
| Firm ZE | Biomass | 12 |
| | Geothermal | 258 |
| Total | | 631 |

Summary of Forecasted Progress Towards Total MTR and Supplemental Reported by LSE and Resource Type in LSEs' August 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC

MTR Procurement Takeaways

- As of the 8/1/2023 Compliance Filings, LSEs forecast to have procured **11,052 MW NQC of general procurement** of the 13,500 MW NQC obligation needed to be online by 6/1/2027:
 - This is inclusive of 2,978 MW NQC verified by CPUC Staff to be online as of 8/1/2023.
 - This includes LSE procurement that has come on early for later MTR tranches, individual LSE compliance towards Tranche 1 is pending CPUC Staff verification.
 - This is inclusive of **783 MW** NQC procured for **Diablo Canyon Replacement Resources** out of the 2,500 MW NQC obligation to be online by 6/1/2025.
 - LSEs' progress towards Diablo Canyon Replacement Firm Zero Emitting is pending the compliance documentation verification to be filed by 2/1/2025.

MTR Procurement Takeaways (cont.)

- As of the 8/1/2023 Compliance Filings, LSE forecast to have procured **631 MW NQC of Long Lead Time resources** of the 2,000 MW NQC obligation. Specifically:
 - 361 MW NQC of Long duration energy storage (LDES)
 - 270 MW NQC of Firm Zero- Emitting (Firm ZE)

Questions?



Contact IRPDataRequest@cpuc.ca.gov
[IRP Procurement Track \(ca.gov\)](#)