

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

Energy Division Staff Review

February 2023 Data Filing

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California Public
Utilities Commission

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IRP Procurement Orders, Requirements, and Backstop Procurement

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 2023	December 2024	December 2025	December 2026	December 2027	December 2028
CPUC Reviews LSE Compliance Filings <u>only</u>	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.

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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 CPUC staff to evaluate the need for backstop procurement on a case-by-case basis on February 1 filings through 2023 and December 1 filings for 2023 and beyond .

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 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 February 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 are required to report on procurement efforts twice per year, in February and August.

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
Grand 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 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 opt-out LSEs.

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 opt-out LSEs.

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	20.2	10.1	10.1	40.3
	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	37.0	18.5	18.5	74.0
	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	1.7	0.8	0.8	3.4
	Valley Clean Energy Alliance	VCEA	6.3	3.2	3.2	12.6
	Calpine Energy Solutions	NES	25.4	12.7	12.7	50.8
	Calpine PowerAmerica-CA, L.L.C. (1362)	CPA	8.6	4.3	4.3	17.1
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

Requirements by Tranche by LSE

- Each LSE has a procurement requirement for each tranche
- 25 LSEs submitted information related to all their requirements
- LSEs that opted out of procurement are not included in table -- their MW requirements are included in IOU totals

LSE Type	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
CCA	Apple Valley Choice Energy	AVCE	1.9	1.0	1.0	3.8
	Monterey Bay Community Power Authority	CCCE	28.7	14.4	14.4	57.4
	Clean Power Alliance of Southern California	CPASC	98.5	49.2	49.2	196.9
	Clean Power SF	CPSF	28.5	14.3	14.3	57.0
	East Bay Community Energy	EBCE	49.8	24.9	24.9	99.6
	Lancaster Choice Energy	LCE	4.7	2.4	2.4	9.4
	Marin Clean Energy	MCE	43.8	21.9	21.9	87.5
	Peninsula Clean Energy Authority	PCEA	27.5	13.8	13.8	55.0
	Pioneer Community Energy	PIONEER	9.3	4.6	4.6	18.5
	Pico Rivera Innovative Municipal Energy	PRIME	1.3	0.7	0.7	2.6
	Redwood Coast Energy Authority	RCEA	5.4	2.7	2.7	10.7
	Rancho Mirage Energy Authority	RMEA	2.4	1.2	1.2	4.8
	San Jose Clean Energy	SJCE	38.8	19.4	19.4	77.6
	San Jacinto Power	SJP	1.4	0.7	0.7	2.8
	Sonoma Clean Power Authority	SOMA	21.7	10.8	10.8	43.3
	Silicon Valley Clean Energy Authority	SVCE	33.6	16.8	16.8	67.2
	Valley Clean Energy Alliance	VCEA	6.3	3.2	3.2	12.6
ESP	Calpine Power America	CPA				
	Direct Energy Business	DEB				
	Calpine Energy Solutions	NES				
	Shell Energy North America	SENA				
	University of California	UC				
IOU	Pacific Gas & Electric	PGE	382.6	191.3	191.3	765.1
	Southern California Edison	SCE	620.7	310.3	310.3	1241.3
	San Diego Gas & Electric	SDGE	150.7	75.3	75.3	301.3
Grand Total			1,650	825	825	3,300

Note: Consistent with the 9/23/21 ruling in R. 20-05-003, specifically in reference to D.06-06-066, modified by D.07-05-043, ESP obligations are confidential and have been redacted.

Progress Towards D.19-11-016 Procurement Requirements Reported by LSEs in Their February 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 2/1/2023 filing date, including subsequent communications with Staff, but they have not been updated based on Summer Reliability procurement reports.
- All data displayed online reflects LSE-reported information as of 2/1/2023, and all subsequent dates represent forecasts.
- The data in this report was not subject to the new [NQC calculator](#) and Nameplate validation process that will be included in 8/1/2023 and subsequent filings.

Procurement Reported by Tranche by LSE Type

LSE Type	Requirement Tranche 1	Tranche 1 Claimed	Excess or Shortfall Tranche 1	Requirement Tranche 2	Tranche 2 Claimed	Excess or Shortfall Tranche 2	Requirement Tranche 3	Tranche 3 Claimed	Excess or Shortfall Tranche 3
IOU	1,154	1,405	251	1,731	1,940	209	2,308	2,463	155
CCA	403	780	377	605	1,053	448	807	1,230	423
ESP	93	118	25	139	187	48	186	235	49
Grand Total	1,650	2,304	732	2,475	3,179	704	3,300	3,927	626

- LSEs provided documentation that reports they expect to be collectively **over-procured** for all tranches.
 - CPUC staff expect that LSEs will opt to rollover any excess procurement into their MTR obligations

Procurement by IOU by Tranche

IOU	Requirement Tranche 1	Tranche 1 Claimed	Excess or Shortfall Tranche 1	Requirement Tranche 2	Tranche 2 Claimed	Excess or Shortfall Tranche 2	Requirement Tranche 3	Tranche 3 Claimed	Excess or Shortfall Tranche 3
PGE	383	423	40	574	590	16	765	783	18
SCE	621	770	149	931	1,030	99	1,241	1,360	119
SDGE	151	212	62	226	320	94	301	320	18
Grand Total	1,154	1,405	252	1,731	1,940	209	2,308	2,463	155

- In the August 2022 filing, PG&E and SDG&E suffered delays, but as of the February 2023 filing all IOUs have sufficient procurement for compliance with D.19-11-016.

Procurement by CCA by Tranche

Row Labels	Requirement Tranche 1	Tranche 1 Claimed	Excess or Shortfall Tranche 1	Requirement Tranche 2	Tranche 2 Claimed	Excess or Shortfall Tranche 2	Requirement Tranche 3	Tranche 3 Claimed	Excess or Shortfall Tranche 3
AVCE	2	2	0	3	3	0	4	4	0
CCCE	29	60	31	43	60	17	57	60	3
CPASC	98	214	116	148	315	168	197	315	118
CPSF	29	77	49	43	147	104	57	147	90
EBCE	50	52	2	75	60	-15	100	110	11
LCE	5	5	0	7	9	2	9	9	0
MCE	44	70	26	66	70	4	88	89	2
PCEA	28	42	14	41	42	1	55	131	76
PIONEER	9	15	6	14	20	6	19	20	1
PRIME	1	1	0	2	2	1	3	3	0
RCEA	5	6	0	8	8	0	11	22	11
RMEA	2	3	0	4	4	0	5	5	0
SJCE	39	57	18	58	126	67	78	126	48
SJP	1	1	0	2	2	0	3	3	0
SOMA	22	82	60	32	82	50	43	82	39
SVCE	34	87	53	50	87	37	67	87	20
VCEA	6	7	1	9	17	7	13	17	4
Grand Total	403	780	377	605	1,053	448	807	1,230	423

- All CCAs have reported sufficient procurement for compliance with D.19-11-016.
- EBCE had shortfalls for Tranche 2 but claimed enough obligation for Tranche 3 to compensate.

Procurement Reported by LSE Type and Expected Online Date

LSE Type	Sum of Online by 8/1/21	Sum of Online by 8/1/22	Sum of Online by 8/1/23	Online after 8/1/23	Grand Total
IOU	764	675	918	106	2,463
CCA	369	642	148	71	1,230
ESP	128	68	39	0	235
Grand Total	1,261	1,385	1,105	177	3,927
Procurement Obligation Status	Below the 1,650 MW ordered for Tranche 1	Above the 825 MW ordered, and fulfilled Tranche 1	Above the 825 MW ordered, fulfilled Tranche 3 and so some excess may carryover to MTR		

- This chart sorts the marginal MWs reported by expected online dates instead of Tranche to demonstrate that online date and tranches do not directly correspond.
 - 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.
- The expected total (~4,000 MW) exceeds the 3,300 MW required online by 8/1/2023.

Procurement by LSE by Online Date

Note: Consistent with the 9/23/21 ruling in R. 20-05-003, specifically in reference to D.06-06-066, modified by D.07-05-043, ESP obligations are confidential and have been redacted.

*Grand totals include procurement delayed past order

LSE Type	LSE	Online by 8/1/21	Online by 8/1/22	Online by 8/1/23	Online after 8/1/23
IOU	PGE	150	463	737	783
	SCE	560	770	1,300	1,360
	SDGE	54	206	320	320
CCA	AVCE	3	3	4	4
	CCCE	0	60	60	60
	CPASC	54	315	315	315
	CPSF	30	100	147	147
	EBCE	34	60	110	110
	LCE	6	9	9	9
	MCE	74	74	89	89
	PCEA	42	42	61	131
	PIONEER	9	20	20	20
	PRIME	2	2	3	3
	RCEA	6	8	22	22
	RMEA	3	4	5	5
	SJCE	57	126	126	126
	SJP	2	3	3	3
	SOMA	7	82	82	82
	SVCE	33	87	87	87
	VCEA	7	17	17	17
ESP	CPA				
	DEB				
	NES				
	SENA				
	UC				
Grand Total		1,261	2,646	3,751	3,927

Procurement Reported by Resource Type and Expected Online Date

Resource Type	Online by 8/1/21	Online by 8/1/22	Online by 8/1/23	Online after 8/1/23	Grand Total
Battery	273	682	737	60	1,751
Biomass	3	0	0	0	3
DR	23	9	23	1	55
Geothermal Storage	0	60	0	0	60
Solar	64	81	72	0	217
Hybrid	469	494	273	116	1,352
Thermal	328	0	0	0	328
Wind	102	59	0	0	161
Grand Total	1,261	1,385	1,105	177	3,927

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

Total Online vs. In Development (Resource Type)

- This chart shows which resources were online versus in development as of February 2023.
- As of the 2/1/2023 Filings, more than two-thirds of the total expected resources are online.
- Of the pending new resources, the most common technology type is battery.

LSE Type	Resource Type	Online	Pending	Grand Total
IOU	Battery	852	597	1,448
	Geothermal Storage	60	0	60
	DR	0	5	5
	Hybrid	835	71	905
	Thermal	44	0	44
CCA	Battery	290	0	290
	Biomass	3	0	3
	DR	49	1	50
	Solar	64	33	97
	Hybrid	312	120	432
	Thermal	230	0	230
	Wind	128	0	128
ESP	Battery	13	0	13
	Solar	81	39	120
	Hybrid	15	0	15
	Thermal	54	0	54
	Wind	34	0	34
Grand Total		3,063	865	3,927

Are LSE types meeting their tranche requirements on time?

LSE Type	Requirement Tranche 1	Online by 8/1/21	Excess or Shortfall 2021	Requirement Tranche 2	Online by 8/1/22	Excess or Shortfall 2022	Requirement Tranche 3	Expected Online by 8/1/23	Expected Excess or Shortfall 2023	Expected Online after 8/1/23	Total Expected Excess or Shortfall total
CCA	403	369	-34	605	1,011	406	807	1,159	352	1,230	423
ESP	93	128	35	139	197	58	186	235	49	235	49
IOU	1,154	764	-390	1,731	1,439	-292	2,308	2,357	49	2,463	155
Grand Total	1,650	1,261	-389	2,475	2,646	171	3,300	3,751	450	3,927	626

- As of the 2/1 filings, LSEs all are expected to have resources online and exceed Tranche 3 obligations, but collectively experienced delays in earlier tranches:
 - As of the required online date for Tranche 1, 8/1/2021, only ~1300 of 1650 required MWs had come online.
 - LSEs were collectively able to catch up and meet Tranche 2 on time.
 - IOUs did not meet Tranche 2 on time.

Are LSEs meeting their tranche requirements on time?

- Several LSEs were late in meeting their Tranche 1 obligations, but reported sufficient procurement by 2/1/2022 (except EBCE, PG&E, SCE and SDG&E).
- PG&E reported insufficient procurement online by 8/1/2023 for Tranche 3.
- PG&E notified the Commission on August 8th, 2023, of this delay in a letter to Exec Director Rachel Peterson.

Note: Consistent with the 9/23/21 ruling in R. 20-05-003, specifically in reference to D.06-06-066, modified by D.07-05-043, ESP obligations are confidential and have been redacted.

LSE Type	LSE	Requirement Tranche 1	Online by 8/1/21	Excess or Shortfall 2021	Requirement Tranche 2	Online by 8/1/22	Excess or Shortfall 2022	Requirement Tranche 3	Expected Online by 8/1/23	Expected Excess or Shortfall 2023	Expected Online after 8/1/23	Total Expected Excess or Shortfall total
CCA	AVCE	2	3	1	3	3	0	4	4	0	4	0
	CCCE	29	0	-29	43	60	17	57	60	3	60	3
	CPASC	98	54	-44	148	315	167	197	315	118	315	118
	CPSF	29	30	1	43	100	57	57	147	90	147	90
	EBCE	50	34	-16	75	60	-15	100	110	10	110	10
	LCE	5	6	1	7	9	2	9	9	0	9	0
	MCE	44	74	30	66	74	8	88	89	1	89	1
	PCEA	28	42	14	41	42	1	55	61	6	131	76
	PIONEER	9	9	0	14	20	6	19	20	1	20	1
	PRIME	1	2	1	2	2	0	3	3	0	3	0
	RCEA	5	6	1	8	8	0	11	22	11	22	11
	RMEA	2	3	1	4	4	0	5	5	0	5	0
	SJCE	39	57	18	58	126	68	78	126	48	126	48
	SJP	1	2	1	2	3	1	3	3	0	3	0
	SOMA	22	7	-15	33	82	49	43	82	39	82	39
	SVCE	34	33	-1	50	87	37	67	87	20	87	20
	VCEA	6	7	1	9	17	8	13	17	4	17	4
ESP	CPA											
	DEB											
	NES											
	SENA											
	UC											
IOU	PGE	383	150	-233	574	463	-111	765	737	-28	783	18
	SCE	621	560	-61	931	770	-161	1,241	1,300	59	1,360	119
	SDGE	151	54	-97	226	206	-20	301	320	19	320	19
Grand Total		1,652	1,261	-401	2,477	2,646	169	3,301	3,751	450	3,927	22,626

D.19-11-016 Takeaways

- As of the 2/1 Filings, LSEs are reporting 3,927 MW of total procurement toward D.19-11-016, which is slightly higher than the 3,790 MWs reported in August 2022's IRP Compliance Filing as well as higher than the total 3,300 MWs ordered.
 - LSE reported that 3,063 MW of the reported 3,927 MWs are online (see slide 19).
- All LSEs are reporting to complete their D.19-11-016 obligations.
 - PG&E reported that by 8/1/2023 ~28 MWs of Tranche 3 requirement are expected to come online late but will have 18 MWs surplus online to meet compliance after 8/1/2023 (see slide 22).

Mid-Term Reliability Background

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

MTR Background

- The CPUC ordered Load Serving Entities (LSEs) to procure 11,500 MW of new resources between August 2023 and June 2026 via an order in the Integrated Resource Planning (IRP) proceeding, D.21-06-035.
- LSEs submitted compliance filings in February 2023 in compliance with this order. LSEs will continue to file twice per year.
- 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 will face 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.
 - Other clarifications or adjustments on topics including penalties, compliance, and specific procurement categories.

Baseline Swap 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](#)

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
2024: Tranche 2
2025: Tranche 3
- 2026: Tranche 4
2027: Tranche 5
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.

Requirements by Tranche by LSE Type

LSE Type	Sum of 2023 (Tranche 1)	Sum of 2024 (Tranche 2)	Sum of 2025 (Tranche 3)	Sum of 2026	Sum of 2027	Sum of 2028 (LLT)	Sum of DCR Minimum zero- emitting capacity by 2025	Total Sum of By 2028
CCA	620	1,855	476	671	671	681	840	5002
ESP	193	580	146	186	186	193	242	1485
IOU	1,187	3,563	877	1144	1144	1170	1462	9012
Grand Total	2,000	6,000	1,500	2,000	2,000	2,045	2,500	15,500

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	All ESPs	193	580	146	193	242	1,112	186	186	372	1,485
IOU	PGE	400	1,201	300	400	500	2301	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 February 1, 2023, Compliance Filings

Aggregation of Procurement Reported to CPUC by LSE Type and Tranche

Notes about Tables

- The data in this report was not subject to the new [NQC calculator](#) and Nameplate validation process that will be included in 8/1/2023 and subsequent filings.
- 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 Staff.
- The 2/1 Filings were collected before LSEs were able to start procurement towards supplemental MTR and thus procurement in this report only includes progress towards MTR obligations with the caveat of adjusting the LLT obligation to 2028.
- All data displayed online reflects LSE-reported information as of 2/1/2023, and all subsequent dates represent forecasts.
- The following CCA reported 0 MW MTR procurement despite having obligations to procure: KCCP.
 - Note: CCAs that only have Supplemental MTR obligations (D.23-02-040) and not MTR (D.21-06-035) are not included in this compliance filing: OCPA, PALMDALE.

General Procurement Claimed by Tranche

Aggregation of Procurement Reported to CPUC by LSE Type
and Tranche

Procurement Reported by Tranche by LSE Type

LSE Type	MTR 2023 Tranche 1 Claimed	MTR 2024 Tranche 2 Claimed	MTR 2025 Tranche 3 Claimed	MTR 2028 LDES Claimed	MTR Firm ZE Claimed	MTR DCR ZE 2025 Gen Paired DR Claimed	MTR Total
CCA	730	1,465	940	282	358	1,384	3,776
ESP	181	111	0	0	0	140	292
IOU	1,077	2861	295	0	0	1,744	4,233
Grand Total	1,988	4,437	1,235	282	358	3,268	8,301

- This table shows NQC MWs procurement progress towards the MTR procurement order and includes MWs in the Diablo Canyon Replacement category and LLT resources.
 - The total 8,301 MW displayed here includes 31 MWs provided with invalid CODs

Procurement by IOU by Tranche

LSE Type	LSE	MTR Tranche 1 Claimed	MTR Tranche 2 Claimed	MTR Tranche 3 Claimed	MTR Tranche 4 LDES Claimed	MTR Tranche 4 Firm ZE Claimed	MTR DCR ZE Gen Paired DR Claimed	MTR Total
IOU	PGE	400	946	295	0	0	169	1,642
	SCE	658	1,750	0	0	0	1,575	2,409
	SDGE	19	164	0	0	0	0	183
Grand Total		1,077	2,861	295	0	0	1,744	4,233

MTR Total Claimed Online vs. In Development

MTR Total Online vs. In Development (Resource Type)

Resource Type	Online	Pending	Grand Total
Battery	181	4,621	4,803
Biomass	0	11	11
DR	11	14	24
Geothermal	31	231	262
Solar	0	29	29
Wind	154	17	171
Hydro	178	0	178
Solar Storage	648	2,101	2,749
Unspecified Source	75	0	75
Grand Total	1,277	7,024	8,301

- The MWs are reported as online and have not been validated as reaching COD.
- A majority of new resources coming online are batteries and Hybrid (solar + storage).
- Total is less than MTR obligation as contracting for MTR is still ongoing.
- The total 8,301 MW displayed here includes 31 MWs provided with invalid CODs

Procurement by Online Date

Aggregation of Procurement Reported to CPUC by LSE Type and Tranche

MTR Procurement Reported by LSE Type and Expected Online Date

LSE Type	Online as of 2/1/23	Expected Online by 8/1/23	Expected Online by 6/1/24	Expected Online by 6/1/25	Expected Online by 6/1/26	Expected Online by 6/1/28
CCA	706	942	2,295	3,154	3,717	3,745
ESP	120	245	292	292	167	292
IOU	465	1,339	3,739	4,233	3,784	4,233
Grand Total	1,291	2,527	6,325	7,679	7,668	8,270

- This table shows procurement progress towards the general procurement targets set in the MTR and procurement order and includes the Diablo Canyon Replacement category and LLT resources.
- 31 MW are not included in this table due to invalid CODs.
- Supplemental MTR Procurement efforts were not provided in the 2/1 Compliance Filings.
- This chart sorts the MWs reported by expected online dates instead of Tranche to demonstrate that online date and tranches do not directly correspond (as some Tranche 1 procurement occurred late).
- The expected total 2,527 MWs above the 2,000 MW required online by 8/1/2023, however this includes early procurement by LSEs that have MWs coming online early for later tranches.
- The expected total 6,325 MW is above the 6,000 MW required online by 8/1/2024, however this includes early procurement by LSEs that have MWs coming online early for later tranches.
- The expected total 7,679 MW is above the 7,500 MW required online by 8/1/2025, however this includes early procurement by LSEs that have MWs coming online early for later tranches.

MTR Procurement Reported by Resource Type and Expected Online Date

Resource Type	Online as of 2/1/23	Cumulative Online by 8/1/23	Cumulative Online by 6/1/24	Cumulative Online by 6/1/25	Cumulative Online by 6/1/26	Cumulative Online by 6/1/28
Battery	181	1,067	3,616	4,345	4,353	4,802
Biomass	0	11	11	11	0	11
DR	24	24	24	24	24	24
Geothermal	31	31	49	177	232	232
Geothermal Storage	0	0	0	0	0	0
Hydro	178	178	178	178	178	178
Nuclear	0	0	0	0	0	0
Pumped Hydro	0	0	0	0	0	0
Solar	0	16	16	29	29	29
Solar Storage	648	972	2,204	2,670	2,607	2,749
Unspecified Source	75	75	75	75	75	75
Wind	154	154	154	171	171	171
Grand Total	1,291	2,527	6,325	7,679	7,668	8,270

Are LSEs meeting their obligations?

Aggregation of Procurement Reported to CPUC by LSE Type
and Tranche

MTR Claimed Procurement vs Obligation

- The following tables show the MWs LSE reported towards each MTR tranche compared to their procurement obligation.
 - 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.

MTR Procurement v. Obligation by LSE Type

LSE Type	MTR Tranche 1			MTR Tranche 2			MTR Tranche 3			MTR LDES			MTR Firm ZE			MTR DCR Firm ZE Paired			MTR Total		
	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall
CCA	621	730	110	1,855	1,465	-390	463	940	477	310	282	-28	310	358	48	773	1,384	611	3,560	3,776	216
ESP	193	181	-12	580	111	-469	146	0	-146	97	0	-97	97	0	-97	242	140	-102	1,112	292	-820
IOU	1,188	1,077	-110	3,563	2,861	-702	891	295	-596	594	0	-594	594	0	-594	1,483	1,744	261	6,829	4,233	-2,596
Grand Total	2,001	1,988	-13	5,998	4,437	-1,561	1,500	1,235	-265	1,001	282	-719	1,001	358	-642	2,498	3,268	770	11,500	8,301	-3,200

- As of the 2/1 Filings, the LSEs collective progress towards MTR shows **under procurement** as contracting is still underway.
 - Collectively LSEs provided documentation that reports they expect to collectively fall short of tranche 1 by 12 MWs.
 - LSEs did not report sufficient procurement progress towards Tranche 2, Tranche 3, or LLT obligations.
 - LSEs' progress towards Diablo Canyon Replacement Firm Zero-Emitting is shown above but is pending the necessary compliance documentation verification which is required to be filed by 2/1/2025.
 - Only CCAs have reported procurement towards LLT resources.
 - The total 8,301 MW displayed here includes 31 MWs provided with invalid CODs

MTR Procurement v. Obligation by IOU

IOUs	MTR Tranche 1			MTR Tranche 2			MTR Tranche 3			MTR LDES			MTR Firm ZE			MTR DCR Firm ZE Paired			MTR Total		
	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall	Obligation	Claimed	Excess/Shortfall
PG&E	400	400	0	1,201	946	-255	300	295	-5	200	0	-200	200	0	-200	500	169	-331	2,301	1,642	-659
SCE	705	658	-47	2,114	1,750	-364	529	0	-529	353	0	-353	353	0	-353	880	1,575	695	4,053	2,409	-1,644
SDG&E	83	19	-64	248	164	-84	62	0	-62	41	0	-41	41	0	-41	103	0	-103	475	183	-292
Total	1,188	1,077	-110	3,563	2,861	-702	891	295	-596	594	0	-594	594	0	-594	1,483	1,744	261	6,829	4,233	-2,596

- As of the 2/1 Filings, the IOUs collective progress towards MTR shows **under procurement** as contracting is still underway.
 - PG&E reported sufficient progress towards Tranche 1, whereas, SCE and SDG&E reported insufficient procurement.
 - The IOUs collectively reported deficiencies for Tranche 2 and Tranche 3, and
 - The IOUs did not report any procurement towards LLT.
 - PG&E and SDG&E reported insufficient progress towards Diablo Canyon Replacement Firm Zero Emitting but is pending the necessary compliance documentation verification to be filed by

MTR Procurement v. Obligation by CCA

- As of the 2/1 Filings, the CCAs collective progress towards MTR shows **over procurement** as contracting is still underway.
 - CCAs collectively reported sufficient progress towards Tranche 1.
 - CCAs collectively reported deficient procurement towards Tranche 2 but report sufficient procurement for Tranche 3.
 - CCAs' reported sufficient progress towards Diablo Canyon Replacement Firm Zero Emitting but is pending the necessary compliance documentation verification to be filed by 2/1/2025.
 - CCAs have reported sufficient procurement progress towards Firm ZE and some procurement towards LDES.

MTR Takeaways

- As of the 2/1 Filings the LSEs are collective progress towards total MTR shows **under procurement by ~3,200 MWs**.
 - The IOUs collective progress towards MTR shows **under procurement by ~2,600 MWs**.
 - The CCAs collective progress towards MTR shows **over procurement by 220 MWs**.
 - The ESPs collective progress towards MTR shows **under procurement by ~700 MWs**.
- Most LSEs have begun conducting MTR procurement.
- LSEs provided documentation that reports they expect to collectively come close to meeting Tranche 1 and Diablo Canyon Replacement but are not yet sufficiently contracted to meet Tranche 2, Tranche 3, or LLT obligations.
- Collectively LSEs provided documentation that reports they expect to collectively fall short of tranche 1 by 12 MWs.
- LSEs did not report sufficient procurement progress towards Tranche 2, Tranche 3, or LLT obligations.
 - Only CCAs have reported procurement towards LLT resources.
- LSEs' progress towards Diablo Canyon Replacement Firm Zero Emitting is pending the necessary compliance documentation verification to be filed by 2/1/2025.

MTR LLT Resource Procurement Status

LSE Progress towards LLT procurement reported by online date

LLT Extension Requests

- LLT extension requests were received from 34 LSEs:
 - **IOUs:** PG&E, SCE, SDG&E
 - **CCAs:** AVCE, CEA, CPASC, CPSF, DCE, CCCE, EBCE, KCCP, LCE, MCE, PCEA, PIONEER, POMONA, PRIME, RMEA, SBCE, SDCP, SJCE, SJP, SOMA, SVCE, VCEA
 - **ESPs:** REDACTED

LLT Procurement by LSE Type

LSE Type	D.21 2028 LDES	D.21 2028 FIRM ZE	Grand Total
CCA	282	358	641
ESP	0	0	0
IOU	0	0	0
Grand Total	282	358	641

LLT Procurement by LSE 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	282	-28	310	358	48	621	641	20
ESP	97	0	-97	97	0	-97	193	0	-193
IOU	594	0	-594	594	0	-594	1,188	0	-1,188
Grand Total	1,000	282	-719	1,000	358	-642	2,000	641	-1,361

- 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.

LLT Procurement by Forecasted Online Date

LLT Category	Invalid COD	Online	Online by 8/1/2023	Online by 6/1/2024	Online by 6/1/2025	Online by 6/1/2026	Grand Total
FIRM ZE	31	13	11	17	122	165	358
LDES	0	0	0	0	36	246	282
Grand total	31	13	11	17	158	411	641

Firm ZE by Resource Type by Forecasted Online Date

Resource Type	Invalid COD	Online	Online by 8/1/2023	Online by 6/1/2024	Online by 6/1/2025	Online by 6/1/2026	Grand Total
Battery	0	0	0	0	0	110	110
Biomass	0	0	11	0	0	0	11
Geothermal	31	13		17	122	55	237
Grand Total	31	13	11	17	122	165	358

LDES by Resource Type by Forecasted Online Date

Resource Type	Online	Online by 8/1/2023	Online by 6/1/2024	Online by 6/1/2025	Online by 6/1/2026	Grand Total
Battery	0	0	0	36	138	219
Solar Storage	0	0	0	0	63	63
Grand Total	0	0	0	0	246	282

LLT Take Aways

- As of the 2/1 Filings, the LSEs collective progress towards LLT shows **under procurement**.
- As of 2/1 Filings, only CCAs have reported procurement towards LLT resources.
- As of 2/1 Filings, only CCAs have reported procurement towards LLT resources.
- CCAs have reported sufficient procurement progress towards Firm ZE.
- CCAs have reported ~30 MW short of sufficient procurement towards LDES.



Questions?



Contact Sophie Babka for questions regarding this presentation at: Sophie.Babka@cpuc.ca.gov or IRPDataRequest@cpuc.ca.gov

[IRP Procurement Track \(ca.gov\)](https://www.cpuc.ca.gov/IRP/ProcurementTrack)

LSE Acronym Charts

LSE Acronym Chart

LSE Type	Acronym	LSE Name
IOU	PGE	Pacific Gas and Electric (Bundled)
	SCE	Southern California Edison (Bundled)
	SDGE	San Diego Gas and Electric (Bundled)
ESP	CPA	Calpine Power America-CA, LLC
	DEB	Direct Energy Business, LLC
	NES	Calpine Energy Solutions, LLC
	SENA	Shell Energy North America
	UC	University of California Regents
	3PR	3 Phases Renewables, Inc.
	CES	Commercial Energy of CA
	CNE	Constellation NewEnergy, Inc.
	CPA	Calpine Power America-CA, LLC
	DEB	Direct Energy Business, LLC
	EIPS	EDF Industrial Power Services (CA), LLC
	NES	Calpine Energy Solutions, LLC
	PPG	Pilot Power Group, Inc.
	SENA	Shell Energy North America
	TNG	Tiger Natural Gas, Inc.
	UCOP	University of California Regents
CCA	AVCE	Apple Valley Choice Energy
	CCCE	Monterey Bay Community Power Authority
	CPASC	Clean Power Alliance of Southern California
	CPSF	Clean Power San Francisco

LSE Type	Acronym	LSE Name
CCA	EBCE	East Bay Community Energy
	LCE	Lancaster Clean Energy
	MCE	Marin Clean Energy
	PCEA	Peninsula Clean Energy Authority
	PIONEER	Pioneer Community Energy
	PRIME	Pico Rivera Innovative Municipal Energy
	RCEA	Redwood Coast Energy Authority
	RMEA	Rancho Mirage Energy Authority
	SJCE	San Jose Clean Energy
	SJP	San Jacinto Power
	SOMA	Sonoma Clean Power Authority
	SVCE	Silicon Valley Clean Energy
	VCEA	Valley Clean Energy Alliance
	CCCE	Central Coast Community Energy
	CEA	Clean Energy Alliance
	COBP	Baldwin Park, City of
	DCE	Desert Community Energy
	KCCP	King City Community Power
	OCPA	Orange County Power Authority**
	PALMDALE	Energy for Palmdale's Independent Choice**
	POMONA	Pomona, City of
	SBCE	Santa Barbara Clean Energy
	SDCP	San Diego Community Power
	WCE	Western Community Energy