

State of California

M e m o r a n d u m

Date: August 28, 2026

To: Integrated Resource Planning (IRP) stakeholders

From: Energy Division Staff, CPUC

Subject: Mid-Term Reliability Effective Load Carrying Capabilities (MTR ELCCs) to be used for 2030-2031 Procurement Ordered by Decision 26-02-057

Summary

With this Staff Transmittal Memo, Energy Division staff (Staff) are publishing the Effective Load Carrying Capabilities (ELCCs) to be used for 2030-2031 mid-term reliability (MTR) procurement compliance with Decision [D.]26-02-057. Pursuant to D.26-02-057, load serving entities (LSEs) and stakeholders should refer to the specific content within the “ELCC Study for 2030-2031 Mid-Term Reliability Procurement” (2026 Study) prepared by CPUC consultants, E3 and PowerGEM (formerly Astrapé) that accompanies this 2026 Staff Transmittal Memo (August 2026 Memo).

Staff direct LSEs to use the MTR ELCCs provided in the 2026 Study for solar, storage resources (differentiated by duration and charging capabilities), energy-only resources co-located with fully-deliverable storage (differentiated by technology and location), in-state wind (differentiated by location), out-of-state wind (differentiated by location), and offshore wind (differentiated by location) when contracting to meet 2030 and 2031 compliance dates. For other resources, including but not limited to geothermal, hydropower (differentiated by size), and demand response (DR), Staff direct LSEs to use the September system resource adequacy Net Qualifying Capacity (September NQC) counting rules at the time the contract for the new resource or capacity added to an existing resource is executed. At present, the values are not applicable to

procurement pursuant to any future orders including, but not limited to, the Reliable and Clean Power Procurement Program.

Procedural Context, Process, and Use Case for ELCCs

In CPUC Rulemaking (R.) 25-06-019, the Commission adopted a requirement via D.26-02-057 Ordering Paragraph (OP) 9 that requires:

Accreditation for resources used to satisfy the requirements of Ordering Paragraph 1 and Ordering Paragraph 2 shall be determined on the basis of two marginal effective load carrying capability (ELCC) studies conducted by California Public Utilities Commission staff. The marginal ELCC study for compliance values for resources due online by 2030 and 2031 shall be published by no later than July 31, 2026. The marginal ELCC study for compliance values for resources due online by 2032 shall be published by no later than December 31, 2027. The ELCC studies shall specify technology-specific and storage-duration-specific values to reflect expected ELCCs based on future resource portfolio composition.

D.26-02-057 Conclusion of Law (COL) 10 further notes:

The individual storage and generation components of a co-located project should each count toward the procurement required in this decision based on their individual ELCC value.

The July 27, 2026 Letter Granting an Extension of Time under Rule 16.6 of the CPUC's Rules of Practice and Procedure extended the deadline for Staff to circulate the study:

...an extension of time for the 2030-2031 ELCC Study has been granted by Executive Director Leuwam Tesfai. [Energy Division] will serve the 2030-2031 ELCC Study (including the ELCCs to be used for compliance for the 2030 and 2031 tranches) by August 31, 2026. [Energy Division] will also provide indicative ELCCs for 2032 by September 15, 2026, with 2032 ELCCs for compliance to be published by December 31, 2027.

Under an existing IRP technical services contract, Staff engaged consultants E3 and PowerGEM to conduct the study to determine the ELCCs, which accompanies this memo. Note that the report uses the term “MTR” ELCCs rather than “marginal” ELCCs to describe the ELCCs to be used for compliance with D.26-02-057. MTR ELCCs include the ELCCs calculated for solar and storage resources, which were evaluated across their entire estimated new resource quantities to appropriately represent the range of marginal ELCC values across the added procurement. This ELCC approach recognizes that adopting an MTR

ELCC value inherently requires accepting that each additional anticipated MW of new resource will have a slightly different contribution to reliability. This approach is consistent with approaches in the 2021 and 2023 ELCC studies for MTR procurement, even though there have been some substantial changes in storage ELCC values. ELCC values have changed because the CAISO system is approaching a resource balance where resource marginal ELCCs, especially energy storage and solar, are sensitive to portfolio changes, as shown in Figure 1 in the 2026 Study.

Staff summarize the use case for the MTR ELCCs as follows: the ELCC values are to be used to convert the nameplate capacity of a resource into MTR net qualifying capacity (MTR-NQC) for the purpose of assessing an LSE's compliance with its procurement requirements. Staff offer this example: an LSE procuring an incremental, standalone 4-hour storage resource with a nameplate capacity of 100 MW and an online date on or before the compliance date in 2031 can count it towards their D.26-02-057 MTR requirement as $100 \text{ MW} \times 38\% \text{ ELCC} = 38 \text{ MW MTR-NQC}$. The 38% figure is drawn from Table 1 of the 2026 Study.

The storage results presented in Table 1 are applicable to all storage technologies, provided that such storage resources have comparable or better round-trip efficiencies (see Table 4) and durations. Results for storage technologies with durations that are not explicitly modeled in the 2026 Study should be linearly interpolated based on the duration and charging capabilities of the procured technology. Staff offer this as an example: an LSE procuring an incremental, standalone 6-hour storage resource with a nameplate capacity of 100 MW and an online date on or before the compliance date in 2031 can count it towards their D.26-02-057 requirement as $100 \text{ MW} \times [38\% \text{ ELCC} + 0.5 \times (55\% \text{ ELCC} - 38\% \text{ ELCC})] = 46.5 \text{ MW MTR-NQC}$.

ELCCs to be used for compliance with the 2030 and 2031 tranches include MTR ELCCs calculated in the 2026 Study itself as well as ELCCs calculated for the 2026 filing requirements, depending on the resource.¹

Staff highlight COL 20 from D.26-02-057:

LSEs should be eligible to count any excess procurement undertaken to meet D.21-06-035 or D.23-02-040 requirements toward the requirements of

¹ Reliability Filing Requirements for Load Serving Entities' 2024-26 Integrated Resource Plans: Results of Marginal ELCC Studies, February 2026. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan/2024-2026-irp-cycle-events-and-materials/reliability-filing-requirements_lses-2024-26_irp-plans_20260210.pdf

this decision, or in the potential future RCPMP requirements, if the resources otherwise qualify under the terms of this decision.

Staff connect this possibility with the use of MTR ELCCs as follows. If a single resource is being used by an LSE to comply with procurement requirements across multiple decisions or tranches, the LSE can count it towards the tranche it first comes online in time for (e.g. tranche 1), up to the LSE's obligation for tranche 1, using tranche 1's MTR ELCC, and then count the remaining balance of the resource's nameplate capacity towards the next tranche (e.g. tranche 2) using tranche 2's MTR ELCC, and so on. In this way, LSEs have equal access to each tranche's ELCCs, regardless of how many resources they are using to comply, and Staff expect this to result in procurement of resource types and amounts that meet the reliability need. Staff offer this example: if an LSE has a 50 MW MTR-NQC by 2028 procurement obligation and a 50 MW MTR-NQC by 2030 procurement obligation and wants to procure a 100 MW 12-hour storage resource with an online date of January 2028, then that resource could count for up to 50 MW MTR-NQC towards the 2028 obligation. If 50 MW MTR-NQC is used toward the 2028 obligation, then 27.2 MW MTR-NQC could be used towards the 2030 obligation. This is because the 2023 MTR ELCC Study has a 2028 ELCC value for 12-hour storage of 92.7% while the 2026 Study has an ELCC value for that same resource of 59%.

1. $(50 \text{ MW MTR-NQC}) / (92.7\% \text{ ELCC for 12-hour storage}) = 53.9 \text{ MW nameplate used for 2028 compliance.}$
2. $[(100-53.9) \text{ MW nameplate}] * (59\% \text{ ELCC for 12-hour storage}) = 27.2 \text{ MW MTR-NQC available for 2030 compliance.}$

The ultimate split between tranches is at the discretion of the LSE.

This same valuation approach should be used if an LSE is meeting its obligations in a tranche early, regardless of how many resources it is using. In other words, the LSE should count the resources using the ELCCs for that tranche, but only up to the LSE's obligation for that tranche.

ELCCs in Effect for 2030 and 2031 Compliance Dates

Staff direct stakeholders to information within the 2026 Study which is in effect for the 2030 and 2031 compliance dates associated with D.26-02-057 procurement as follows:

Table 1, see “2030/2031” column:

- Solar
- Storage for 4-, 8-, 12-, and 100-hour durations

100-hour duration storage is split into two resource classes: storage with a maximum power rating (in MW) for charging equal to the maximum power rating for discharging (1x Pmax Charge) and storage with a maximum power rating (in MW) for charging that is twice as high as the maximum power rating for discharging (2x Pmax Charge). As noted earlier, results for storage technologies with durations that are not explicitly modeled should be linearly interpolated between the ELCC values for 1x Pmax Charge resources.

- Energy-only resources co-located with fully-deliverable storage
 - Solar
 - Northern California (NorCal) wind
 - Southern California (SoCal) wind
- In-state wind in NorCal
- In-state wind in SoCal
- Out-of-state wind

Out-of-state wind ELCC values are differentiated based on region, with values for Wyoming wind, Idaho/Washington/Oregon wind, and Arizona/New Mexico wind.

- Offshore wind

Offshore wind ELCC values are differentiated based on region; NorCal values should be applied to wind located off the coast of Humboldt County while SoCal values should be applied to wind located off the Central Coast.

- Geothermal
- Small and large hydro
- Demand response

Resource Counting for Resource Types Not Discussed

Staff note that there may be some technologies not specifically referred to above, nor in the 2026 Study, for which it is reasonable to use the MTR ELCCs discussed above because they will perform similarly. LSEs should provide an engineering assessment that justifies the similar performance of these resources to support compliance in these cases. For all other resource types, including but not limited to geothermal, hydropower (differentiated by size), and DR, counting will be in accordance with the September system resource adequacy NQC counting rules at the time the contract for the new resource or capacity added to an existing resource is executed.²

Conclusion

This Memo and the accompanying 2026 Study by E3 and PowerGEM provide the MTR ELCCs to be used for the 2030 and 2031 compliance dates in D.26-02-057. The MTR ELCCs for 2030 and 2031 compliance dates are applicable only to contracts entered into on or before June 1, 2031; for contracts entered after this date and/or meant to fulfill 2032 compliance obligations pursuant to D.26-02-057, LSEs will use updated MTR ELCCs, to be provided by Staff in December 2027.

The MTR ELCC values result from using the latest available data and state-of-the-art modeling methods, thereby ensuring procurement pursuant to D.26-02-057 fulfills the identified reliability need as effectively as possible. For questions about other aspects of D.26-02-057 please refer to the IRP Procurement Track website,³ where Staff has provided various additional materials. For additional questions, stakeholders can contact Staff at IRPDataRequest@cpuc.ca.gov.

² Monthly system resource adequacy NQC counting rules can be found at this webpage: <https://www.cpsc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/resource-adequacy-homepage/resource-adequacy-compliance-materials>

³ See here: [IRP Procurement Track Compliance Filing Materials](#)