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REPLY COMMENTS ON THE ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENTS ON RELIABLE AND CLEAN POWER PROCUREMENT PROGRAM ("RCPPP") STAFF PROPOSAL

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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), the California Energy Storage Alliance ("CESA") hereby submits these Reply Comments on the Administrative Law Judge's ("ALJ") *Ruling Seeking Comments on Reliability and Clean Power Procurement Program Staff Proposal* ("Proposal"), issued on April 29, 2025. These Reply Comments are filed in accordance with the ALJ's *Email Ruling Granting Request for Extension of Time*, filed May 15, 2025, granting the request for extension of time to file comments on the Proposal to July 15, 2025 and reply comments on the Proposal to August 5, 2025.

I. Introduction

CESA appreciates the opportunity to provide these Reply Comments on the ALJ's Ruling Seeking Comments on the Reliable and Clean Power Procurement Program ("RCPPP") Staff Proposal. CESA's primary objective remains to ensure a reliable and decarbonized electric grid by establishing a simple and clear mid- and long-term procurement framework that accurately reflects energy storage's contribution to emission reductions and fosters proactive investment in clean and reliable resources for California's future grid.

- ***Section II*** discusses party support for the concepts underpinning CESA's reliability proposal,
- ***Section III*** discusses why parties' support for using Slice-of-Day ("SOD") accounting in the RCPPP is not persuasive,
- ***Section IV*** discusses how PG&E's 2030 SOD stack analysis demonstrates that using the SOD methodology in the RCPPP would unjustifiably increase costs for ratepayers,
- ***Section V*** discusses why PG&E's claim that marginal ELCC accreditation would cost it more than SOD accreditation lacks necessary details to reasonably interpret and verify and therefore should not be considered a finding of fact,
- ***Section VI*** discusses why parties' contention that Commercial Operations Date ("COD") requirements are needed in the RCPPP framework are not persuasive,
- ***Section VII*** discusses why CESA strongly disagrees that procurement orders should be limited to zero carbon generating resources and co-located energy storage resources as recommended by PG&E,
- ***Section VIII*** discusses party support for the Greenhouse Gas ("GHG") reduction framework to use hourly matching for Clean Energy Standard ("CES") compliance to accurately value energy storage and clean firm resources,
- ***Section IX*** explains that using the Power Source Disclosure Program ("PSDP") hourly matching results from the California Energy Commission ("CEC") is more accurate than applying a fixed solar/storage ratio to RECs in the CES as suggested by SCE,
- ***Section X*** discusses CESA's support for other parties' proposals.

II. Several Parties Support the Concepts Underpinning CESA's Reliability Proposal

CESA is encouraged by the broad support for several of the key concepts underpinning its proposals for both reliability and greenhouse gas ("GHG") reduction frameworks within the RCPPP.

A. Marginal ELCC Provides Accurate and Efficient Signals For New Resource Development

Support for using marginal ELCC in the RCPPP is broad, with proponents emphasizing its ability to provide accurate and efficient signals for resource development and retention, particularly for new resources. Proponents of marginal ELCC view it as a sophisticated and established tool for long-term resource planning that accurately reflects resource value and incentivizes a balanced portfolio, particularly for new resource development. Many acknowledge its complexities or potential volatility and propose mechanisms like vintaging or bounding to enhance predictability for market participants. Some of the entities supporting marginal ELCC oppose other aspects of its implementation, such as bounding. CESA addresses those aspects in ***Section II.B***. Many stakeholders, including CESA, recognize that marginal ELCC provides accurate and efficient signals for new resource development.

Large-Scale Solar Association and Solar Energy Industries Association ("LSA-SEIA") state that utilizing the marginal ELCC method for new resource procurement targets is key because these values signal the relative reliability of different resource types.[1] They highlight that marginal ELCC provides a clear, fungible capacity value for contracting and a uniform forward procurement signal for investing in new resources. Terra-Gen agrees with the use of marginal ELCC values for

[1] LSA-SEIA Opening Comments, Section I.2.B

reliability resource accreditation, stating it provides a more accurate signal for valuation of new build contributions and aligns with industry best practices. They emphasize its ability to provide accurate price signals and efficient investment incentives, recognizing diminishing returns and encouraging diverse resources.

Calpine articulates a clear preference for marginal ELCC,[2] emphasizing its foundation in a rigorous and accurate methodology. It also explicitly contrasts marginal ELCC with the SOD approach, noting SOD's well-known challenges, such as its failure to address multi-day reliability events, its ad hoc valuation of intermittent resources like wind and solar, and its inherent instability.

SoCalGas believes that the proposed use of marginal ELCC to calculate Reliability Need Determination could make progress towards valuing important underrepresented resource attributes, as it has a built-in feature to modify the value of resource types as their characteristics become over or under supplied.[3]

Vistra supports the use of transparent means such as published marginal ELCC values to make informed decisions about generation and storage portfolios.[4] They believe that the marginal ELCC approach helps determine which resource types offer the greatest reliability value and supports augmentation or retirement decisions.

Form Energy explicitly supports the use of marginal ELCC values in the RCPPP, asserting that accurate reliability planning requires marginal ELCC values that best reflect dynamic system conditions.[5]

[2] Calpine Opening Comments, Section I and Section II.A.3
[3] SoCalGas Opening Comments, Section II.B
[4] Vistra Opening Comments, Section II.C
[5] Form Energy Opening Comments, Section III.B

Middle River Power ("MRP") strongly supports using marginal ELCC as the capacity accreditation methodology for the RCPPP.[6] MRP views marginal ELCC as a rigorous stochastic assessment that provides a computationally rigorous and more realistic value to a resource's contribution to system reliability, enabling LSEs to compare resources knowing that one MW of one resource type is equivalent to one MW of another for reliability planning.

B. A Vintaged Marginal ELCC Approach Should Be Used To Mitigate ELCC Volatility Concerns and Provide a Stable and Predictable Valuation for Capacity

In its opening comments, CESA specifically proposed[7] a 6-year vintaging of marginal ELCCs, similar to the Commission's Mid-Term Reliability ("MTR") approach. This vintaging approach would provide a more steady and predictable cadence to ELCC development and compliance, and would also better inform long lead-time resource development compared to Energy Division's unbounded approach, while offering an improvement over a simple bounding approach. While some parties like PG&E, MRP, Calpine, SDG&E, and Vistra express reservations or opposition to bounding marginal ELCCs, often preferring reliance on market signals and prioritizing precision in setting the reliability requirements over development certainty, the widespread support for some form of fixed, bounded, or vintaged marginal ELCC among new-build advocates underscores the importance of predictability for long-term procurement. This is precisely what CESA's proposed vintaged marginal ELCC framework aims to provide. As CESA stated in opening comments,[8] it understands that vintaging of marginal ELCCs will have a higher degree of uncertainty regarding whether the ELCC value ultimately over or under represents each resource's eventual reliability contribution in the compliance year. Nonetheless, a vintaged value

[6] MRP Opening Comments, Section II.A.5
[7] CESA Opening Comments, Section II.E
[8] CESA Opening Comments, pg. 18

will provide a reasonable approximation applicable to new build resources and it makes practical sense to give LSEs certainty during their RCPPP procurement process. Furthermore, it will provide a clear and simple signal to the forward development market to accomplish the important task of getting resources built, while letting the RA program retain resources as necessary to bridge materialized uncertainty.

Recognizing the potential for volatility with marginal ELCC values, several parties, including CESA, advocate for mechanisms to stabilize these values, primarily through vintaging, fixing, or bounding.

LSA-SEIA explicitly supports the use of vintaged marginal ELCC values for compliance with new resource procurement targets.[9] They emphasize that this approach reduces market volatility from unbounded marginal ELCCs and refer to CESA's vintaging concept presented at the RCPPP workshops.

CalAdvocates recommends that if marginal ELCC is adopted, the Commission should bind the marginal ELCCs for the same years that the Reliability Procurement Requirement ("RPR") levels are fixed (T+0 through T+2).[10] Its justification is that this would provide enough stability in the resource accreditation values to allow LSEs to solicit and negotiate contracts more easily in the near-term. They also suggest annual ELCC studies to ensure accuracy within the fixed periods. CESA can see value in annual ELCC studies that would produce indicative ELCC during the fixed periods to better inform RA market of the likelihood of the accreditation uncertainty materializing. The critical issue is that these indicative ELCC values should help inform RA market fundamentals while the new resource procurement compliance continues to be stabilized through vintaging.

[9] LSA-SEIA Opening Comments, Section I.2.B
[10] CalAdvocates Opening Comments, Section IV.J

SCE notes the significant volatility of marginal ELCC values and strongly recommends that, at a minimum, the marginal ELCC values for T+4 and T+5 should be bound.[11] This bounding, they argue, would provide certainty for LSEs' planning and avoid large amount of last-minute procurement that will likely be costly and may not be feasible. SCE further argues that the negative effects of applying marginal ELCCs are minimized under Option II compared to Option I.[12]

Terra-Gen strongly endorses a framework that involves the Commission setting permanent, "fixed" ELCC values for each compliance year.[13] Its rationale is that this approach would mitigate ELCC volatility and ensure long-term planning certainty, and by providing a stable and predictable valuation for capacity, it would lead to more effective direction of resources and capital towards meeting California's future system needs.

Form Energy recommends that the RCPPP implement a vintaged marginal ELCC approach for new vintage resources, rather than applying marginal ELCC to all existing resources.[14] Unlike both Options I and II defined in the CPUC staff proposal, this approach would define a vintaged set of marginal ELCCs for the resources deployed in each compliance year. While also supporting unbounded marginal ELCCs for new resources in principle, their vintaged approach is key to its practical application.

ACP-California, while generally critical of "unvintaged marginal ELCC" due to its volatility and barriers to financing, explicitly recommends that if marginal ELCC is used for new build requirements, it should be firmly bounded to support actionable procurement and

[11] SCE Opening Comments, Section III.C.2
[12] *Id.*, Section III.A.3
[13] Terra-Gen Opening Comments, Section II.B.ii
[14] Form Energy Opening Comments, Section III.B

contracting, particularly for periods beyond T+3. This indicates a preference for a stable, fixed, or vintaged approach for new builds.[15]

ENGIE North America ("ENGIE") states that if the CPUC proceeds with marginal ELCC accounting, it must develop a method for bounding the values so that the risk of volatility is socialized among LSEs. They specifically refer to CESA's vintaging concept as a potentially good method to achieve this stability.[16]

C. The Commission Should Focus the Reliability Framework on New Resource Procurement (Option II-like), a Contract Status Baseline, and Proactive Contracting

In its Opening Comments, CESA proposed for the RCPPP framework to focus on new resource procurement only, similar to Reliability Option II, but importantly, with a timeline akin to Reliability Option I, and the adoption of a "Contract Status" baseline method for assessing Load Serving Entity ("LSE") procurement.[17] CESA also proposed a 100% contracting requirement by T+4 to provide certainty for proactive investment.[18] Several parties expressed similar views. Many parties supporting a new resource requirement defaulted to supporting Option II alone, which CESA still believes falls short (as described in CESA's opening comments). Nonetheless, there is clear support for a new-only procurement construct.

CalAdvocates recommends[19] adopting Reliability Option II, stating it is superior to reliability Option I on ensuring reliability at potentially lower ratepayer costs. CESA agrees with their rationale regarding a focus on new resource procurement. Specifically, they argue that Option

[15] ACP-CA Opening Comments, pgs. 25-26
[16] ENGIE Opening Comments, pg. 10
[17] CESA Opening Comments, pgs. 12-13
[18] *Id.*
[19] CalAdvocates Opening Comments, Section IV.A

II incorporates a new resource procurement requirement coupled with an existing resource retirement allowance. This ensures that LSEs do not shirk the hard work of incremental resource development and includes appropriate new resource development milestones and penalties. They argue that Option II also supplies long-term liquidity for the system RA market and reduces the probability of tight system RA market conditions, which Option I fails to address, potentially leading to "musical chairs" in the RA market. While CESA understands that addressing long-term liquidity for system RA market and reducing its tightness will likely arise under either option, CESA appreciates the sentiment and agrees that directionally this should be a goal of the RCPPP framework.

The California Independent System Operator ("CAISO") advocates for the inclusion of explicit new build procurement orders within the RCPPP framework. CAISO views these dedicated new build requirements as critical to ensuring the timely deployment of capital and development of new projects to meet future needs.[20] CAISO highlights that the Commission's prior MTR procurement orders, which explicitly mandated LSEs to contract for new resources with long-term PPAs, have been highly effective in bringing significant new capacity online. It also argues that RA penalties and clean procurement targets by themselves are not clear enough signals to ensure LSEs collectively procure reliable portfolios and invest in new resources where and when needed.

Southern California Edison Company ("SCE") strongly advocates for adopting Staff's proposed Reliability Option II with minor modifications. It emphasizes that Option II is most likely to achieve the fundamental goal of any IRP reliability procurement program – developing the new

[20] CAISO Opening Comments, Section II.C

resources needed to maintain system reliability.[21] It argues that Option II follows the proven approach of past Mid-Term Reliability ("MTR") procurement orders by setting specific procurement targets for new reliability resources and allocating this responsibility to all LSEs by load share.

American Clean Power-California ("ACP-CA") explicitly supports a modified Option II reliability framework and a transition to a contract status-based procurement framework.[22] ACP-CA also proposes aggressive contracting minimums for new build and re-contracted resources, targeting 100% for T+1, T+2, and T+3, and 80% for T+4,[23] which aligns with CESA's call for strong forward contracting requirements.

LSA-SEIA emphasizes the need for a clear and separate target for new resources. It states that Option 2 provides a clearer target for new resource procurement. It also argues that Option I, which allows LSEs to procure both new and existing resources, might encourage extended use of existing fossil generation.[24] In contrast, Option 2 clearly delineates roles, with IRP focusing on new resource development and RA managing existing resources, providing a more direct and effective signal for the necessary build-out of new clean energy infrastructure. CESA does however acknowledge fears raised by developers that have cited that extending Slice-of-Day ("SOD") accreditation and charging sufficiency rules for the extended RA program will result in the opposite by providing relatively higher accreditation to thermal resources. The SOD rules are structured to incentivize retaining thermals and as such Option II that extends SOD may result in

[21] SCE Opening Comments, Section II.A
[22] ACP-CA Opening Comments, pgs. 19-21
[23] ACP-CA Opening Comments, pg. 25
[24] LSA-SEIA Opening Comments, Section II

both retaining thermals and adding new resources without the expected retirement until a much later date. Consequently, CESA has structured its proposal to try to balance these concerns.

The Utility Reform Network ("TURN") supports Option II due to its focus on new build resources.[25] It states that the Commission must assign the highest priority to ensuring that all LSEs are required to contribute towards the development of new resources. Option II would allow the new reliability mechanism to occupy a unique niche given that the RA program does not distinguish between existing and new resources, ensuring that new reliability capacity development is prioritized.

ENGIE explicitly states that the RCPPP framework must prioritize the development of new resources. While it finds both Option I and Option II acceptable, it asserts that Option 2 more clearly encourages investment in new resources.[26] Without a distinct new-build target, LSEs might default to cheaper short-term choices like maintaining or repowering older gas-fired plants, even if these are not ideal long-term solutions.

Mainspring Energy ("MSE") prefers Staff Paper Option II over Option I. It states Option II offers market certainty through relatively clearer (though still not sufficiently differentiated) procurement targets for new generation.[27]

Geothermal Heat Center ("GHC") GHC agrees with other parties that the Commission should establish new build procurement requirements to directly identify and drive contracting to achieve reliability requirements, rather than leaving new build to an uncoordinated process.[28]

[25] TURN Opening Comments, Section II.A.1
[26] ENGIE Opening Comments, Section IV
[27] MSE Opening Comments, Section III.C
[28] GHC Opening Comments, Section II

Terra-Gen believes that Option II, which separates procurement targets for new and existing resources, is more appropriate.[29] It proposes dedicating the RCPPP to driving long-term investment (T+3 to T+6) through a modified Option II with a separate target for new resources. They argue that Option II provides a clearer target for new resource procurement and a clear and explicit mandate for new builds, which is essential for achieving California's long-term energy goals. Without such a signal, LSEs might prioritize older, less efficient plants.

III. Parties' Support for Using SOD Accounting in the RCPPP Is Not Persuasive

CESA and other parties identified several critical flaws in the application of SOD to the IRP process. CESA is not persuaded by parties'[30] support for using SOD accounting in the RCPPP.

A. Parties Err in Their Argument That Using SOD in RCPPP Would Create Desirable Alignment with the Existing RA Program, Promoting Simplicity, Transparency, and Clearer Signals

In general, parties argued that the RCPPP should use the SOD framework's accounting to prevent LSEs from planning towards divergent standards and to reduce discrepancies in resource valuation across both RA and IRP programs. They further argue that this alignment would promote simplicity, transparency, and clearer procurement signals.

The novel SOD framework remains incomplete even in its current application to the RA program. This inherent incompleteness means that applying it to RCPPP would not achieve true simplicity or alignment but rather perpetuate uncertainty. Specifically, there is a continued delay in establishing clear and uniform Long-Duration Energy Storage ("LDES") and Multi-Day Storage

[29] Terra-Gen Opening Comments, Section II.A

[30] ACP-CA, the Alliance for Retail Energy Markets ("AReM"), Ava Community Energy ("Ava"), California Community Choice Association ("CalCCA"), California Wind Energy Association ("CalWEA"), Green Power Institute ("GPI"), LSA-SEIA, Pacific Gas and Electric Company ("PG&E"), and Silicon Valley Clean Energy ("SVCE") advocate for using SOD accounting in the RCPPP framework.

charging sufficiency requirements and accreditation, which puts LDES at an unfair competitive disadvantage under the framework. The absence of this important policy would necessitate a divergence in the application of the SOD framework in the important forward planning space, which must consider the reliability contribution from these resources well in advance of operations. Furthermore, the accuracy of the novel implementation of the exceedance methodology for variable energy resources has been debated since its creation. For the IRP process, a proven, clear, and fungible accounting method like marginal ELCC is needed to support new resource development, which is the core purpose of IRP/RCPPP.

The novel SOD framework does not provide clearer procurement signals. Under SOD, the Qualified Capacity ("QC") for energy storage is not known by the market prior to negotiations due to its dependence on the other resources in each LSE's portfolio (opaque) and is not the same across all LSEs (non-uniform). This lack of uniformity and the resulting non-fungible product complicates procurement, leading to suboptimal resource choices and increased costs, which ultimately fall on ratepayers.

B. Parties Err in Their Suggestion That SOD Helps Prevent Cost Shifts, Ensures Reliability at Lower Costs, and Avoids Over-Procurement

In general, parties argued that consistent use of the SOD framework will lead to better procurement outcomes, lower costs, provide consistent market signals, and help prevent cost shifts. This has not been the case even in its current application in the RA program.

SOD resource accounting is too costly to be applied in the IRP process. CESA points out that transactability issues persist because the granularity of the product does not match the

granularity of the requirement, costing ratepayers upwards of $180 million per year.[31] This significant market friction was explicitly introduced into the RA program by the SOD framework itself. These costs also indicate that the SOD framework has thus far led to, rather than avoided, over-procurement. Therefore, continuing or extending the SOD framework into the IRP space would perpetuate these inefficiencies and costs, undermining any affordability benefits claimed by its proponents. Simply, SOD is not intended to drive new generation but rather to encourage each LSE to contract with existing resources to meet their hourly load requirements. This means that while the SOD framework may increase costs, those costs are limited within a prompt-year RA program. However, if the SOD framework were extended to the IRP and used to justify higher build requirements, it could unnecessarily drive up new build costs without any guarantee of improved reliability.

In its comments, Calpine[32] addressed parties' arguments that marginal ELCC counting rules lead to a "cost shift" because an LSE with sufficient resources to cover its load in all hours under SOD may be deemed deficient under a marginal ELCC framework. Calpine explains that this might appear to happen under a compliance framework tied to peak load when capacity requirements and counting actually reflect conditions in critical hours, which may not correspond to peak load hours. The Staff Proposal largely addresses this issue by allocating capacity requirements to LSEs based on their loads in the same critical hours that determine marginal ELCC values.

[31] CESA Opening Comments, pg. 10
[32] Calpine Opening Comments, Section II.B.10

C. Parties Err in Their Argument That SOD is Well-Suited for Long-Term Planning and Reduces the Need for Frequent Updates

In general, parties argue that the SOD framework is well-suited for the translation of Loss of Load Expectation ("LOLE") study results to requirements, assessing LSE progress and allocating needs, and mitigates accreditation volatility by reducing the need for frequent updates.

Applying the SOD framework to the IRP process would introduce unforeseen design issues, complicating its purported alignment with long-term planning objectives. The SOD need allocation is based on each LSE's hourly load shape, which is more difficult to forecast further into the future due to risks like load migration and electrification progress. Extending this accounting beyond one or two years at most would exacerbate these risks, creating greater challenges for LSEs. This inherent difficulty in mid- to long- term hourly forecasting makes SOD fundamentally unsuitable for the forward-looking, multi-year IRP/RCPPP process.

The novel SOD framework is thus far incomplete and therefore will be subject to frequent updates that perpetuate uncertainty in the years to come. For instance, the current IRP model accurately and intrinsically accounts for charging sufficiency in marginal ELCC values. However, several parties[33] raise the point that the RA program's SOD framework does not similarly account for Energy Only ("EO") resource interaction within the charging sufficiency verification. This results in costly over procurement and unjustifiably disincentivizes the procurement of standalone storage, which can be a particularly useful resource for meeting growing local reliability needs in land-constrained urban centers and for facilitating the retirement of fossil fuel plants in local capacity areas, thereby reducing local pollution burdens. Parties attempted to rectify this issue in

[33] ACP-CA, LSA, MRP, Joint Stakeholders

the SOD framework in the latest track of the RA proceeding,[34] but ultimately the policy development needs much more time highlighting that the SOD framework remains subject to frequent updates. Calpine[35] also noted the SOD framework's well-known challenges, such as its failure to address multi-day reliability events, its ad hoc valuation of intermittent resources like wind and solar, and its inherent instability. These challenges further indicate that the SOD framework will continue to be subject to frequent updates causing instability in the mid- to long-term planning space.

IV. PG&E's 2030 SOD Stack Analysis Demonstrates That Using the SOD Methodology in the RCPPP Would Unjustifiably Increase Costs for Ratepayers

PG&E's 2030 system-wide SOD results contrast with the Commission's own recent IRP results showing a **0.000** Loss of Load Expectation ("LOLE") in 2030, requiring no procurement beyond what LSEs have already planned. A more comprehensive description of PG&E's inputs and assumptions is needed to verify the findings. At a high-level, PG&E's analysis, uses the SOD framework's accounting methodology, and shows the potential for both insufficient RA supply and insufficient energy storage at a system-wide level.[36] Under PG&E's assumptions, the analysis demonstrates that even if all of the batteries could be fully charged earlier in the day, there would still not be enough capacity to meet the September 2030 peak day demand forecast plus a 21% planning reserve margin. Based on the analysis, PG&E concludes that an additional approximately 10 GW to 12 GW of renewable procurement is needed prior to 2030, estimating an additional need of approximately 2.9 GW of September Net Qualifying Capacity ("NQC").[37]

[34] R.23-10-011, Track 3
[35] Calpine Opening Comments, Section I and Section II.A.3
[36] PG&E Opening Comments, Section II.A
[37] *Id.*, Section II.V

CESA cautions that these SOD results cannot be directly verified by parties to this proceeding without a more comprehensive description of PG&E's inputs and assumptions. If PG&E's analysis is found to be an accurate application of the SOD framework's accounting, its implied reliability need would likely be even greater in practice due to known transactability issues under the novel framework.[38]

As stated earlier, PG&E's 2030 system-wide SOD results contrast with the Commission's own recent IRP results showing a **0.000** Loss of Load Expectation ("LOLE") in 2030.[39] The current IRP model employs a sophisticated 8,760 analysis across many weather and outage scenarios and uses marginal ELCC to accurately account for each resource's true contribution to reliability. Notably, this model is much better at accounting for energy storage state-of-charge, weather scenarios, solar/wind contributions, and the potential impact of resource maintenance and forced outage conditions. The current IRP modeling also better represents the system-wide ability to provide charging energy, as CAISO conditions typically allow for standalone energy storage resources to charge from excess solar that would otherwise be exported out of California midday.

To avoid burdening ratepayers with unjustified higher costs associated with the novel SOD framework, the RCPPP must continue to use the methods the industry and the Commission have proven to be best practice: achieving a 0.1 LOLE measuring resource contribution to reliability using a marginal ELCC. The discrepancy between the IRP process results and the SOD stack analysis results for 2030 indicates that SOD may not be as accurate as LOLE in assessing capacity

[38] CESA Opening Comments, pg. 10

[39] CPUC Presentation Summarizing Updated RESOLVE and SERVM Analysis, January 10, 2025, slide 33: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2024-2026-irp-cycle-events-and-materials/assumptions-for-the-2025-2026-tpp/25-26-tpp-pd-resolve-and-servm-analysis-slide-deck.pdf

needs in the mid-term planning horizon, while perhaps it adds value in prompt-year basis for the energy sufficiency test to complement this planning. If the Commission intends to order additional procurement for reliability purposes, CESA supports the Commission in quickly updating inputs and assumptions, notably in using the updated CEC load forecast, and using its existing proven reliability assessment methods to consider the need for an expedited procurement order.

V. PG&E's Claim that Marginal ELCC Accreditation Would Cost It More Than SOD Accreditation Lacks Necessary Details to Reasonably Interpret and Verify and Therefore Should Not be Considered a Finding of Fact

PG&E finds that the seam created between using the SOD framework in the RA program and an ELCC paradigm in the RCPPP would not be limited to "slightly different outcomes" and demonstrates that an ELCC paradigm would translate into an additional procurement cost of up to approximately $736 million per year more than the costs of meeting SOD requirements.[40] PG&E also recognizes that the ELCC paradigm could result in less procurement costs than the SOD framework for other LSEs.[41]

CESA cautions that PG&E's results cannot be reasonably interpreted and verified by parties to this proceeding without a more comprehensive description of the inputs and assumptions, as well as a more comprehensive description of the Energy Division's estimated Reliability Procurement Need ("RPN") and ELCC values.[42] For instance, it is not clear whether the Energy Division's estimated RPN has been tuned to a 0.1 LOLE. It is also not clear whether PG&E evaluated its resource contributions towards its share of the RPN in the critical hours, rather than

[40] PG&E Opening Comments, pg. 9
[41] Id., pg. 10 states "The use of both SOD and ELCC will result in over-procurement for some and under-procurement for others with different time horizons and programs…"
[42] Proposal, pg. 19

its share of the gross peak load hour. As for the SOD stack, it's not clear what load forecast was used, its accuracy, and how well it would align with the load forecasts used to determine the indicative marginal ELCC values. Furthermore, the Energy Division has stressed that its marginal ELCC values are only indicative and remain subject to change due to further loss of load probability modeling.[43] Finally, it is not clear what portion of PG&E's excess procurement would be caused by the use of the 2.5% buffer in the RPN, an RCPPP design item which is being separately debated.

The Commission's prior IRP study results indicate a system with significant excess capacity available on an ELCC basis in 2026 through 2030.[44] This observation does not square with PG&E's assertion that an ELCC paradigm would cost it more than an SOD paradigm. For these reasons PG&E's claim should not be considered a finding of fact.

VI. Parties' Contention That COD Requirements Are Needed in the RCPPP Framework Is Not Persuasive

COD requirements are not needed within the RCPPP framework, as they would lead to duplicative penalties for LSEs. While CESA acknowledges the importance of resources coming online, we believe existing mechanisms adequately address this, and new, separate COD requirements in RCPPP would introduce unnecessary complexity and cost. However, some parties have expressed arguments supporting the need for COD or online sufficiency requirements, or similar mechanisms to ensure resources materialize. CESA understands that the Commission may

[43] *Id.*, pg. 24

[44] As evidenced by the 0.002 LOLE in 2026 and the 0.000 LOLE in 2030 based on the TPP portfolio issued in February 2025.

feel compelled to address a perceived incentive for LSEs to engage in “sham contracts,” and offers a targeted solution.

SCE emphasizes that the fundamental goal of any IRP reliability procurement program is to develop the new resources needed for system reliability. It contends that the online sufficiency penalty is the only penalty structure needed to ensure that resources come online.[45] Its rationale for this stance includes the concern that adding a contracting sufficiency penalty will not ensure resources will timely come online and could result in LSEs signing contracts that do not have strong incentives to assure developer performance to avoid penalties, or, even worse, result in sham contracts designed only to avoid penalties. SCE states that the Commission should not have to be in the difficult position of determining the difference between 'real' and 'fake' contracts. They further elaborate that an LSE can easily game contracting sufficiency requirements to avoid these types of penalties without ensuring resources come online by simply signing contracts that do not have strong incentives to assure developer performance.

The existing RA program already manages online status and LSEs’ have a self-interest in meeting reliability obligations. SCE’s concern that LSEs would engage in "sham contracts" if a COD requirement is not imposed within the RCPPP is unsubstantiated and highly speculative. CESA is not persuaded by this rationale. The RA program already serves the critical function of ensuring resources are online and available when needed in the near term. If a "sham contract" fails to materialize into an online resource, the LSE would face the consequences under the RA program, regardless of RCPPP's specific COD requirements. Furthermore, LSEs have a fundamental responsibility to serve their customers' load reliably. Engaging in "sham contracts"

[45] SCE Opening Comments, Section II.A

would inevitably lead to shortfalls in their actual, physical capacity, which would then expose them to penalties and potential service disruptions under the RA program and other reliability mandates. The desire to avoid such real-world operational and financial consequences provides a powerful disincentive against contracting for non-existent resources.

Furthermore, the Energy Division should carefully consider whether COD requirements would impose an inaccurate double-penalty on LSEs.[46] Imposing explicit COD requirements within RCPPP could lead to inaccurate duplicative penalties for LSEs, one for failure to meet RCPPP contracting requirements and one for failure of those contracts to perform in the RA showings. The existing RA program already serves the critical function of ensuring resources are online and available when needed with the added benefit that its requirements are based on up-to-date load forecasts and planning reserve margins. An LSE that is relying on a new resource to meet its RA requirements would be double penalized if the resource commercial operations are delayed. Punishing LSEs again under a separate RCPPP COD penalty for the same non-performance would create unjustified financial burdens and administrative complexities without offering additional reliability benefits. Furthermore, to the extent that system conditions improve compared to the RCPPP requirements, the RCPPP penalties would not be justified (no harm, no foul).

If the Commission feels that avoiding "sham contracts" is a compelling concern that the RCPPP framework must prevent, it should seek a targeted, simple, and straightforward solution that recognizes the key difference between a delay and a "sham contract." For instance, it could penalize LSEs at net CONE if projects or contracts used for RCPPP compliance are cancelled. The Commission could implement this with a relatively simple requirement for LSEs to report on

[46] CESA Opening Comments, pg. 16

cancelled projects or contracts that were used to support RCPPP compliance. Such cancellations would result in a penalty at net CONE. As with project delays, LSEs would remain subject to penalties through the RA program for reliability shortfalls that cannot be covered.

VII. CESA Agrees with Parties That the Commission Should Assess the Need for Near-term Procurement, But Disagrees with PG&E's Recommendation to Limit Resource Types

CESA supports a near-term needs assessment. Timely procurement activity could lock in a cost-effective generation tranche aligned with meeting California's emissions reduction goals. An opportunity that will otherwise be lost due to the impact of the One Big Beautiful Bill Act[47] ("OBBBA") on Production Tax Credits ("PTC") and Investment Tax Credits ("ITC"). The Commission has acknowledged that these credits have a significant impact on portfolio build and portfolio costs in RESOLVE.[48] While energy storage has a longer eligibility timeline for ITC, it has other restrictions from the OBBBA, including increasing limitations on materials from Foreign Entities of Concern ("FEOC"), that create the need for near-term procurement of these resources.

The Commission should also consider CAISO's recommendation to do a needs assessment for 2028-2032 timeframe. CAISO highlights that there are projects in Cluster 14 without PPAs that could come online in this timeframe.[49] CESA also highlights that these Cluster 14 resources only have until the beginning of 2027 to receive a contract in order to retain deliverability. If these resources do not receive a PPA, LSEs will have to wait for Cluster 15 projects that do not have an online date until early-mid 2030 at best.

[47] On July 4, 2025, President Trump signed H.R. 1, titled the One Big Beautiful Bill Act
[48] D.24-02-047, pg. 52
[49] CAISO Opening Comments, Section II.B

Importantly, however, CESA disagrees with PG&E's suggestion that the procurement order be limited to zero carbon generation and co-located resources. Based on its 2030 SOD analysis, PG&E states that "[i]n light of these demonstrated energy sufficiency concerns and absent other actions to affordably mitigate the identified need, PG&E is proposing an interim (i.e., one-time) procurement order limited to zero-carbon (clean energy) generating resources or co-located energy storage resources shown to have sufficient charging capacity (e.g., sufficiently sized co-located resources)."[50]

There is no reasonable basis to exclude standalone energy storage from procurement orders because an LSE that procures a standalone energy storage project and a standalone solar project would provide a functionally equivalent procurement to an LSE that procured co-located energy storage and solar project. Furthermore, the same result is similarly achieved if one LSE procures a standalone storage project while another LSE procures a standalone solar project.

VIII. Numerous Parties Agree That the GHG Reduction Framework Should Use Hourly Matching for CES Compliance to Accurately Value Energy Storage and Clean Firm Resources

CESA proposed that the Commission adopt the Power Source Disclosure Program's ("PSDP") hourly-matched results as the primary measure for Clean Energy Standard ("CES") compliance.[51] This approach is crucial because it improves accuracy and effectiveness, captures the true value of energy storage, and incentivizes the procurement of a diverse portfolio of resources, including clean firm power and dispatchable storage, addressing the saturation effects of renewable generation. Several parties expressed similar views.

[50] PG&E Opening Comments, pg. 4
[51] CESA Opening Comments, Section III.A

While advocating for a mass-based approach, SCE proposes a method that directly limits the total GHG emissions that can be emitted by load-serving entities ("LSEs") at an hourly level.[52] SCE's proposed tool assesses each resource's ability to reduce GHG emissions and emphasizes that hourly assessment of LSE emissions fully recognizes the benefits of storage.[53] These points directly support CESA's core arguments for hourly granularity and valuing storage in GHG accounting.

Ormat Technologies, Inc. ("Ormat") recommends[54] revisions to the CES framework to ensure accurate accounting of resource contributions. These changes are intended to properly reflect the role of clean firm power and dispatchable generation, particularly their ability to deliver energy during critical, carbon-intensive hours. Ormat's recommendation aligns with CESA's call to recognize the true value of energy storage and clean firm resources within the CES.

Terra-Gen supports[55] hourly, mass-based GHG accounting, asserting that it accurately tracks decarbonization, properly values storage, and avoids complexities of a percentage-based standard. This aligns with CESA's reasoning for hourly accounting and storage valuation, even if Terra-Gen proposes a mass-based framework rather than CESA's modified CES.

California Wind Energy Association ("CalWEA") asserts[56] that Energy Division's CES proposal lacks incentives to deliver clean energy in the most carbon-heavy hours, demonstrating the need for the implementation of an hourly accounting method such as that proposed by CESA.

[52] SCE Opening Comments, Section I
[53] SCE's Alternative Proposal To The Reliable And Clean Power Procurement Program Staff Proposal Regarding Greenhouse Gas Reduction, Section II.A
[54] Ormat Opening Comments, Section IV
[55] Terra-Gen Opening Comments, Section II.E
[56] CalWEA Opening Comments, Section II.B

LSA-SEIA states that an hourly assessment of LSE emissions fully recognizes the benefits of storage.[57]

GreenGenStorage, LLC ("GreenGenStorage") states that the CES should adopt an hourly accounting methodology for energy storage's contribution to emissions reduction.[58]

XGS Energy, Inc. ("XGS Energy") explicitly supports[59] hourly matching for CES requirements and following the GHG reporting protocol for the PSDP under Senate Bill ("SB") 1158. XGS Energy also seeks to drive the development of new zero-carbon firm resources that are designed to reliably serve California's load during net peak, overnight, and multi-day reliability events, which aligns directly with CESA's emphasis on the need for dispatchable storage to meet critical decarbonization hours.

Vistra supports adopting an ex-ante procurement requirement for clean energy resources as a percentage of the RPN that must be met by renewable energy credit or zero-energy credit, namely storage and demand response, eligible resources leveraging the IRP portfolios as the initial input to determine the CES percentage.[60] While this proposal is rooted in procurement requirements instead of GHG accounting practices, the proposal is based on an argument that Staff's IRP modeling evaluating 8,760 hours – hourly assessment – is the appropriate basis for determining the share of future portfolios that should be met by renewable or clean energy standards. Further, Vistra also argues that demand response and energy storage should be categorized as Clean Energy Standard or Zero Energy Credit eligible resources given their critical role in integrating and balancing the future Senate Bill 100 fleet.

[57] LSA-SEIA Opening Comments, pg. 21
[58] GreenGenStorage Opening Comments, Section IV.1
[59] XGS Energy Opening Comments, Section IV.2
[60] Vistra Corp. Opening Comments, Section III.E.

With so many parties providing indisputable reasons for why hourly accounting is necessary and the only way forward to equitably treat resource types and effectively incentivize procurement of energy storage, a resource that has been identified by the Commission as critical to meeting state goals while ensuring grid reliability, it behooves the Commission to fully evaluate ways in which hourly accounting could be integrated into RCPPP and ensuring storage is eligible towards zero energy credit accreditation.

IX. Using the Power Source Disclosure Program ("PSDP") Hourly Matching Results From the California Energy Commission ("CEC") Is More Accurate Than Applying a Fixed Solar/Storage Ratio to RECs in the CES

SCE agrees with CESA on the need for an hourly accounting within the CES, stating that it "…prefers the adoption of a mass-based GHG reduction program as detailed in [SCE's] Alternative Proposal."[61] However, SCE also proposes a prescriptive solar to storage charging ratio requirement be used if the Commission decides to maintain a CES-like structure for the reasons outlined in the Staff Proposal.[62] CESA understands and appreciates the importance of ensuring that energy storage's contribution to GHG reduction is accounted for within the RCPPP, but believes applying a prescriptive ratio would be inferior to using the PSDP hourly matching results from the CEC,[63] and may come with unintended consequences as it has not yet been fully developed and vetted by parties.

SCE describes a process in which the Commission would calculate a "storage pairing ratio" requirement using a "CAISO-queue informed portfolio that satisfies the adopted RCPPP GHG

[61] SCE Opening Comments, pg. 54
[62] *Id.*, pg. 55
[63] In Section III of its Opening Comments CESA proposed that the Commission use the hourly matched analysis results from the CEC to assess compliance with the RCPPP GHG reduction requirements.

reduction program MMT target." Based on the information SCE provided, it is not clear that a CAISO-queue informed IRP portfolio would yield an accurate value for the amount of storage needed for an individual LSE to meet its GHG reduction requirement. That is, the calculated ratio could over- or under-prescribe solar resource and storage resource contribution to emissions reduction.

Introducing a new factor, such as a storage pairing ratio, would complicate the RPS program and REC valuations. As CESA describes in its opening comments,[64] the CEC has already put considerable effort into developing an hourly matched calculation methodology to determine whether LSEs have procured sufficient diversity of resources to reduce contributions to emissions in all hours. Although well-intentioned, CESA is concerned that an additional exogenous storage pairing ratio may lead LSEs to inaccurately devalue RECs in the RPS program to account for the risk associated with meeting the storage pairing ratio requirement.

If the Commission decides to maintain a CES-like structure for the reasons outlined in the Staff Proposal, CESA's proposal to use the CEC's results of the PSDP hourly matched assessment would be more accurate and less intrusive on the current RPS program. The results of the CEC's hourly matched assessments as part of the PSDP will be provided to the Commission and Senate Bill ("SB") 1158 (Becker, 2022) authorizes the Commission to utilize this data to assess LSE progress toward emissions targets. Furthermore, the methodology has already been fully vetted by parties through the CEC proceeding.

[64] CESA Opening Comments, Section III

X. CESA Supports Other Parties' Proposals

A. Vistra Makes a Strong Case for Local Capacity Area Considerations in the RCPPP Framework

In opening comments, CESA advocated that longer-term, the Commission should holistically consider local capacity area issues and identify the role for more granular reliable and clean resource accounting.[65] CESA appreciates Vistra's efforts in further defining the issues underlying the need for a more granular accounting and believes their proposal warrants consideration by the Commission.

Vistra expresses significant concern[66] that the proposed RCPPP framework, if not properly designed, could lead to unnecessary additional local capacity procurement and increased overall RA costs. Their primary rationale for this concern is that meeting system needs through non-local resources without explicit local requirements could result in over-reliance on the CAISO Reliability Must Run ("RMR") authority, which they contend adversely impacts ratepayers.

A significant driver for Vistra's proposal is the desire to mitigate the risk of thermal resources, particularly those in local capacity areas, being forced onto RMR contracts. Vistra notes that it owns generation and energy storage assets located in local capacity sub-areas, such as the Greater Bay Area Local Capacity Requirement (LCR). It highlights their Oakland Power Plant ("OPP") as a direct example, which operated under RMR authority between 1998 and 2024 because the system RA need was not large enough to integrate it as a standard RA resource. It shows that RMR designations mean ratepayers pay the CAISO backstop costs, which Vistra contends adversely impacts ratepayers. Finally, it argues that a properly designed RCPPP should

[65] CESA Opening Comments, Section II.F
[66] Vistra Opening Comments, Section II.C

send clear signals for either resource augmentation, retirement, or repowering that mitigate the risk of units being placed on RMR.

To address these concerns, Vistra proposes a modified approach for local capacity areas within the RCPPP:

- ***Integrate CAISO's Local Capacity Requirements ("LCR").*** Vistra recommends adding a new section for "Local Reliability Procurement Need" within the "System Reliability Procurement Need." This would ensure that local requirements for the out years are incorporated into the RCPPP, as determined by CAISO's short-term, mid-term, and long-term local reliability studies. The allocation of this local RPN would be similar to the system RPN.

- ***Allocate Local Resource Adequacy Requirements ("RAR") Directly to LSEs.*** Vistra requests Staff Proposal revisions that would allocate each LSE its proportional share of both system RPR and local RAR. They argue this is the most efficient and equitable way to ensure local needs are met without needlessly increasing capacity costs.

Vistra's comments and proposal highlight the criticality of ensuring that procurement efforts accurately reflect granular, local needs, not just system-wide requirements, to avoid costly inefficiencies and unnecessary reliance on emergency measures. Their proposal aims to ensure that the "most efficient" means are authorized to achieve RA statutory requirements.

B. The Nexus Between Central Procurement and RCPPP Requires Further Consideration to Identify the Best Approach for Long Lead-Time ("LLT") Resource Treatment Within RCPPP

Hydrostor Inc., BHE Renewables, LLC, and the Long-Duration Energy Storage Council ("Joint Parties"), propose a modified RCPPP framework designed to incorporate ongoing procurement of Long Lead-Time ("LLT") resources by LSEs. They argue that the Staff Proposal's current compliance timeframes, which do not provide a procurement signal longer than T+4 years, are insufficient for LLT resources.

The Joint Parties' proposal[67] involves explicitly assessing the need for LLT resources (such as long-duration energy storage, geothermal, and offshore wind, excluding fossil fuels, solar, or short-duration storage) every other year, derived from the Preferred System Plan ("PSP") within the IRP process. This determined need would then be allocated to individual LSEs based on their pro rata share of managed load during critical hours, with binding procurement directives issued for year T+6 and advisory values for T+8 and T+10. The Joint Parties also propose that instead of penalties for LSEs, any unprocured LLT resource capacity would be fulfilled by a designated "backstop authority," such as the Department of Water Resources ("DWR"), with the associated costs allocated only to the deficient LSEs. This approach is designed to complement the existing Staff Proposal and is compatible with both Reliability Option I and Option II, acting as a forward-looking mechanism to drive the development of these essential, capital-intensive resources.

The record in this proceeding is clear that the current IRP models do not accurately represent multi-day energy storage value for long-duration storage that require more than twenty-

[67] Joint Parties Opening Comments, Section III

four hours to perform a full cycle.[68] CESA recommends the Commission continue to address these shortcomings to eliminate the need for one-off assessments and procurement orders in the future, consistent with the goals of RCPPP. CESA advises that resource needs and allocated requirements are determined holistically through the RCPPP assessment. To the extent that these models are not enhanced to accurately account for the reliability and economic value that multi-day energy storage or even long duration energy storage provides, a distinct LLT procurement requirement, as put forward in the Joint Parties', may have merits. However, CESA is not yet convinced that a resource-specific procurement should be required under RCPPP nor backstopped by a central buyer, as this may create adverse incentives parties should further consider.

CDWR's new central procurement function, established under the provisions of Assembly Bill (AB) 1373 (Stats. 2023, Ch.367) is designed to be utilized for "emerging technologies that need to achieve economies of scale to bring costs down, and/or they are not currently being procured by individual LSEs in significant enough amounts to achieve cost reductions, meet long-term environmental goals, or increase resource diversity" as articulated in D.24-08-064.[69] However, CESA acknowledges that this CDWR function is untested and the questions and concerns raised by the Joint Parties merit further consideration of the nexus between RCPPP and central procurement. The Commission stated in its 2024 decision that it "expect[s] the RCPPP and its ultimate design not to have any bearing on CPE procurement requested in [D.24-08-064], but it may influence future need determinations.[4] The way in which RCPPP could inform future need determinations requiring central procurement needs to be considered more comprehensively then it was in the RCPPP Staff Proposal in order to determine how to treat LLTs within RCPPP.

[68] CESA Comments on the Proposed Decision Determining Need for Centralized Procurement of Long Lead-Time Resources, Section II
[69] R.20-05-003, D.24-08-064, pg.2

C. Form Energy Offers an Important Clarification That the Marginal ELCC Values Should Include a Wide Variety of Storage Types and Durations

Given that RCPPP framework will be coordinating a mid- and long-term market for needed resource technologies, CESA emphasizes the importance of including a wide variety of storage types and durations. Form Energy recommends[70] that marginal ELCCs should include a wide variety of storage types and durations, including 4, 8, 12, and up to 100-hour duration storage, to provide clear visibility for LSEs and developers. GreenGenStorage also advocates[71] for a revised ELCC metric for Pumped Hydro Storage ("PSH") that accurately captures its multi-hour, multi-day, and operational flexibility contributions.

[70] Form Energy Opening Comments, Section III.A
[71] GreenGenStorage Opening Comments, Section III.B.3

XI. Conclusion

CESA appreciates the opportunity to submit these reply comments.

Respectfully submitted,

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