

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to
Continue Electric Integrated Resource
Planning and Related Procurement
Processes.

Rulemaking 20-05-003
(Filed on May 7, 2020)

**PETITION FOR MODIFICATION OF DECISIONS 23-02-040 AND 21-06-035 OF THE
CALIFORNIA ENERGY STORAGE ALLIANCE AND THE WESTERN POWER
TRADING FORUM TO ADDRESS LONG LEAD-TIME RESOURCE COMPLIANCE
DEADLINES**

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May 30, 2023

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In accordance with Rule 16.4 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) and The Western Power Trading Forum (“WPTF”) hereby submit this *Petition for Modification of Decisions 23-02-040 and 21-06-035 the California Energy Storage Alliance and The Western Power Trading Forum to Address Long Lead-Time Resource Compliance Deadlines* (“Petition”) seeking modifications on Decision (“D.”) 23-02-040 issued on February 23, 2023 in Rulemaking (“R.”) 20-05-003.

In D.23-02-040, the Commission directed supplemental mid-term reliability (“MTR”) resource procurement for a total of 4,000 megawatts (“MW”) of incremental net qualifying capacity (“NQC”) for each of the Commission-jurisdictional load-serving entities (“LSEs”),¹ modified the commercial operation date (“COD”) for resource procurement compliance of long lead-time (“LLT”) resources to any time between June 1, 2026 and June 1, 2028,² and adopted electricity portfolios for the California Independent System Operator (“CAISO”) to study in its

¹ D.23-02-040 at 28.

² *Ibid* at 27-28.

2023-2024 Transmission Planning Process (“TPP”),³ among other things. The subject of this Petition is the Commission’s decision to automatically extend the COD for all LLT resource procurement, as directed in an earlier Commission decision, D.21-06-035. Given the unique barriers inherent to LLT resources, CESA and WPTF requests several modifications to D.23-02-040 and D.21-06-035 to provide greater upfront clarity on extension requests and criteria for such requests while still adhering to the goals, needs analysis, and intent as originally outlined in D.21-06-035. In addition, considering the urgent and ongoing nature of the procurement activities pursuant to compliance with the LLT resource procurement directed within D.21-06-035, CESA and WPTF respectfully request the Commission to shorten parties’ response time to the relief requested herein to 15 days since the filing of this Petition, as further detailed in the *Motion of the California Energy Storage Alliance and the Western Power Trading Forum to Shorten Time to Respond to Petition For Modification of Decisions 23-02-040 and 21-06-035 to Address Long Lead-Time Resource Compliance Deadlines* (“Motion”), filed concurrently with this Petition.⁴

I. INTRODUCTION.

Over the past several years in the Integrated Resource Planning (“IRP”) proceedings, the Commission has recognized and acted on the various challenges facing California’s electric grid, which is rapidly evolving with the addition of new renewable energy resources and energy storage as well as accelerating the electrification of the building and transportation sectors to meet the state’s decarbonization goals while ensuring reliability in the face of weather and climate variability and uncertainty and legacy generation fleet retirements. The rotating outages of

³ *Ibid* at 50.

⁴ Currently, Commission-jurisdictional LSEs are conducting contracting activities to meet the LLT requirements put forth by D.21-06-035. According to entities represented by CESA and WPTF, the issue of CODs for LLT assets as well as clarity regarding the potential for extensions upon demonstrating good-faith efforts has weighed heavily on bid evaluation and comparison processes.

Summer 2020 and emergency conditions of Summer 2022 have underscored the real-world challenges of transitioning the resource mix to one that is decarbonized and reliable. To address these challenges, the Commission issued D.21-06-035 in June 2021, also referred to herein as the Mid-term Reliability (“MTR”) Procurement Order, to frontload procurement for needs in the early MTR period (2023-2025) and to direct advanced procurement for LLT resources that are needed in the mid-to-late 2020s decade (2026). As Commission defined them,⁵ LLT resources include (1) long-duration energy storage (“LDES”) resources able to deliver at maximum capacity for at least eight hours from a single resource; and (2) generation capacity that has no onsite emissions or is eligible under the requirements of the Renewables Portfolio Standard (“RPS”) Program with an 80% capacity factor or more yet is not use limited or weather dependent. Informed by the 2019-2020 Reference System Portfolio that identified the need for 973 MW, or approximately 1,000 MW, of LDES resources,⁶ the Commission recognized the “reduction in the system’s ability to supply firm and/or dispatchable energy when the grid needs it most” and the importance of resource diversity to reliability in directing the two categories of LLT procurement in the MTR Procurement Order.⁷

Since the issuance of the MTR Procurement Order, the Commission weighed a range of factors in evaluating and then ultimately approving a supplemental procurement order for an additional 4,000 MW of incremental NQC – factors including many of the same drivers for the MTR order (*e.g.*, increasing electrification load, extreme weather events/risks, traditional generation resource retirements) but now adding to it the supply chain delays, inflationary

⁵ D.21-06-035 at Ordering Paragraph (“OP”) 2. *See also* D.21-06-035 at 2-3, 35-36, and Finding of Fact (“FOF”) 8-9.

⁶ D.20-03-028 at 41.

⁷ D.21-06-035 at 35 and FOF 12-14.

environment, and interconnection backlogs ever since emerging from the COVID-19 pandemic.⁸ Recognizing the limitations and additional development time needed for LLT resources, the Commission extended the compliance deadline for all resources in this category to June 1, 2028, alleviating the regulatory burden for multiple extension requests.

CESA and all parties generally supported the change to the compliance deadline for LLT resources. However, as CESA and WPTF details further below, additional refinements and modifications are needed to facilitate the procurement, contracting, financing, and construction of diverse LLT resources considering their inherent challenges and the broadly applicable tough market conditions. As it stands with the compliance deadline, “good-faith effort” criteria, penalty provisions, and backstop triggers for LLT resources under D.21-06-035 and D.23-02-040, there is significant regulatory and market uncertainty to the successful deployment of diverse LLT resources, causing LSEs and developers to be less inclined to pursue these projects given the lack of commercial certainty that would enable successful financing. Many LSEs are in the middle of their procurement processes today and real-time issues are emerging in negotiations that signal a hesitancy to sign contracts for projects that have longer permitting timelines, material supply constraints, interconnection delays, and unavoidable longer construction periods due to the backend risk of penalties or contract breach. Many of the LLT projects are larger in size than any one LSE needs requiring the need for multiple offtake contracts being negotiated in parallel. The developers need to reach a guaranteed level of offtake agreements to proceed with constructing their projects. Given the lead-times associated with LLT resources, coupled with significantly worsening global supply chain, permitting, and interconnection timelines for these resources since the time of (and lead-up to) D.23-02-040, without immediate assurances today that the

⁸ D.23-02-040 at FOF 6.

Commission will allow for further good-faith extensions, many financiers are signaling an unwillingness to invest in a timely manner (and in many cases want a higher premium in exchange). Each of these taken in totality has created volatility that can be mitigated by the Commission signaling now that timeline relief on the backend is possible while maintaining timelines for procurement of these resources to allow for the timeline flexibility needed for successful LLT resource implementation and financing. The sooner the contracting can be finalized, the sooner the developers can order materials and commence construction, leading to lower price contracts and earlier online dates that the uncertainty is causing. It also allows for the LSEs to confidently conclude the current solicitation and move forward with the incremental new 4,000 MW of NQC ordered.

Since early and upfront certainty on compliance risks is needed to procure, contract, and finance LLT resources, CESA and WPTF recommend urgent and timely action to approve and adopt the clarifications and modifications as outlined in this Petition.

II. SUMMARY OF REQUESTED RELIEF.

CESA and WPTF respectfully request that the Commission issue a Proposed Decision as soon as possible to modify D.23-02-040 and D.21-06-035 as follows:

- Allow LSEs to make earlier requests at any time for extensions to the COD requirement for LLT resources to come online beyond June 1, 2028 but no later than June 1, 2031, upon meeting the criteria for good-faith efforts and demonstrated need for such an extension, such as evidence of contract by LSE.
 - In the alternate, and as a minimum, clarify that penalties to the LSE or backstop procurement will not be assessed for LLT resources based on the June 1, 2028 compliance deadline if good-faith efforts are demonstrated and accepted by Commission staff.

The above request is summarized with specific recommended modifications to the Findings of Fact (“FOF”), Conclusions of Law (“COL”), and Ordering Paragraphs (“OP”) to D.23-02-040

and D.21-06-035 (as proposed in Appendix A of this Petition) and is justified on the grounds that diverse LLT resources that are critical to reliability, decarbonization, and resource diversity will have enhanced probability of success as a result, and will result in better long-term reliability and ratepayer outcomes when combined with the various emergency “insurance” programs and procurements in place. In addition, as further described herein, CESA and WPTF support the Commission’s efforts to develop a programmatic approach to procurement and request that its formulation and implementation is expedited to ensure the application of a programmatic approach to procurement that can support the development of the emerging LDES and the multi-day storage market. Furthermore, this Petition is timely submitted because these issues were not sufficiently discussed and evaluated for their merits when first considered in the Proposed Decision that led to D.23-02-040, in part because of rapidly changing global supply chain conditions as well as continually evolving grid connection and permitting requirements for several types of LLT resources in California. In light of recent competitive solicitations to meet LLT resource procurement obligations, many new lessons learned were also experienced on the challenges with the procurement, contracting, financing, and construction of diverse LLT resources, which now inform the Petition submitted herein.

In sum, by granting the requested relief above, the Commission will mitigate regulatory and compliance uncertainty for LSEs, provide greater confidence in the flexibility of deployment timelines for technology providers and developers under rapidly evolving conditions, and, altogether, facilitate the cost-effective contracting and financing of LLT resources, particularly for LDES resources that represent a commercially ready yet relatively new technology class for the California grid thereby experiencing first-of-a-kind implementation considerations in addition to evolving global supply chain issues. While the contents of this Petition speak specifically to LDES

resources given CESA's role as an organization representing the energy storage industry, this Petition may be applicable in many ways to other LLT resources, such as geothermal, offshore wind, or other resource types that fit the definition of LLT resources.⁹

Considering the above and given the critical importance of providing upfront certainty to facilitate the timely procurement and deployment of LLT projects, CESA and WPTF request an expeditious resolution of this Petition via Decision.

III. BACKGROUND.

Leveraging the analysis included in and comments submitted in response to an Administrative Law Judge's ("ALJ") Ruling on February 22, 2021,¹⁰ the Commission weighed several factors to order a historic level of new clean resource procurement to address forecasted reliability needs and simultaneously advance the state's trajectory to decarbonize the electric grid.¹¹ Based on the record developed in response to the same Ruling, the Commission also specified a category of LLT resource procurement of a minimum of 2,000 MW by 2026. Recognizing the challenges and timelines involved in procuring LLT resources, the Commission established a mechanism to seek an extension¹² and the criteria by which such extensions would be evaluated and potentially granted based on "good faith" efforts:¹³

"5. All load-serving entities named in Table 6 of this order, plus the individual electric service providers who will receive their allocations confidentially from Commission staff, shall submit evidence of a good faith effort by February 1, 2023 to procure long lead-time (LLT) resources defined in Ordering Paragraph 2. The Commission will decide after the

⁹ See, e.g., *Opening Comments of Fervo Energy in Response to Section 2 of Administrative Law Judge's Ruling Issued September 8, 2022* filed on September 26, 2022 in R.20-05-003 at 2 and 4.

ADMINISTRATIVE LAW JUDGE'S RULING ISSUED SEPTEMBER 8, 2022

¹⁰ *Administrative Law Judge's Ruling Seeking Feedback on Mid-Term Reliability Analysis and Proposed Procurement Requirements* issued on February 22, 2021 in R.20-05-003.

¹¹ D.21-06-035 at 24-25.

¹² D.21-06-035 at COL 12.

¹³ *Ibid* at OP 5.

February 1, 2023 milestone filing whether to allow an extension up to June 1, 2028 for the LLT resources to come online, or whether to order backstop procurement of the LLT resources. Evidence of a good faith effort shall include, but may not be limited to, at least two of the following:

- (a) Evidence of a solicitation;
- (b) Evidence of bids in a solicitation;
- (c) An executed contract;
- (d) Evidence of site control;
- (e) An interconnection agreement; and
- (f) A notice to proceed.”

Despite no discussion or explanation for establishing the (a)-(f) evidentiary support of good-faith efforts, which may be intentionally done to afford Commission staff in assessing all of the qualitative criteria before making a determination on extension requests or triggering backstop procurement, OP 5 of D.21-06-035 can be interpreted as providing LSEs with some flexibility in LLT procurement timelines or LLT procurement altogether in recognition of the general lack of LLT resources at the time of issuance of the decision. Along these lines, in reassessing incremental procurement needs as well as considering potential solutions to existing procurement directives, the Commission eliminated the need for LSEs to request extensions for LLT resources by extending LLT procurement compliance by June 1, 2028, at which point good-faith efforts will be assessed across all relevant factors and the Commission may issue penalties and/or backstop procurement.¹⁴ Within this same proceeding, on September 8, 2022, ALJ Fitch issued an *Administrative Law Judge's Ruling Seeking Comments on Staff Paper on Procurement Program and Potential Near-term Actions to Encourage Potential Procurement*, which entered into the record a staff paper on programmatic approaches to electricity procurement. D.23-02-040 noted numerous parties' positions that additional procurement should be conducted through the

¹⁴ D.23-02-040 at 27 and 75.

forthcoming programmatic procurement program and asserts the Commission's commitment to timely development of such a program.

While appreciative and supportive of the reduced need for demonstrating good-faith efforts for LLT procurement and extended timelines for commercial operation compliance as modified in D.23-02-040, further refinement is needed to provide early and upfront criteria for extensions to certain LLT resource deployment timelines. This is primarily due to the continually evolving global supply chain and in-state development timelines as noted herein. As explained further below, CESA and WPTF believe that the relief requested in the Petition is justified given the unique circumstances and challenges of LLT resources, the various findings and intent of past Commission decisions, and the new information and insufficient record on barriers and challenges of LLT resources leading up to D.23-02-040.

IV. THE RELIEF REQUESTED WOULD ENHANCE THE PROSPECTS OF SUCCESS FOR MANY CATEGORIES OF LONG LEAD-TIME RESOURCES.

Whether due to the newness or novelty of the underlying technology (*e.g.*, requiring some technical due diligence on behalf of the LSE), due to the large scale of the resource (*e.g.*, requiring joint procurement or enabling infrastructure), and/or due to the geographic-specific nature of the LLT project, the Commission and many stakeholders recognized the unique market and procurement considerations of LLT resources. For these reasons, despite recognizing the importance of LLT resource diversity and attributes, including in IRP modeling that underpinned the resource need determination, the Commission was cognizant of the practicalities of “additional development time” required of LLT resources,¹⁵ despite IRP modeling underpinning the 2019-2020 Reference System Portfolio identifying the need for these resources as early as 2025. In the

¹⁵ D.21-06-035 at 35-36.

same vein, Pacific Gas and Electric Company (“PG&E”) also commented on the general scarcity of eligible LLT resources available in the market, such that the automatic extension to 2028 for LLT resources would invite more competition and lower procurement costs.¹⁶ Considering the unique market and procurement considerations of LLT resources, CESA and WPTF explain further in this section the basis for this Petition and how the relief requested would enhance the prospects of success for certain LLT resources.

A. The same macroeconomic and deployment challenges facing more “commonplace” solar, wind, and lithium-ion battery storage resources extend to many types of LLT resources as well and thereby compound their lead-time needs.

Challenges to new resource development are well-documented and discussed across all state agencies that have a role in planning, procuring, operating, and regulating the electric sector. These challenges include but are not limited to supply chain constraints, trade-related uncertainty or moratoriums, interconnection, and network upgrade delays, permitting delays, and an inflationary macroeconomic environment that has increased the cost of capital, labor costs, and equipment/commodity costs.¹⁷ Even in the decision that directed supplemental MTR procurement, the Commission recognized the lengthy lead time for new resource development at large.¹⁸ These challenges have led to several Commission or local governing board approvals for contract amendments that have extended in-service delivery dates and commercial operation dates for many

¹⁶ *Comments of Pacific Gas and Electric Company (U 39 E) on the Proposed Decision Ordering Supplemental Mid-Term Reliability Procurement (2026-2027) and Transmitting Electric Resource Portfolios to California Independent System Operator for 2023-2024 Transmission Planning Process* filed in R.20-05-003 on February 2, 2023 at 2.

¹⁷ *Diablo Canyon Power Plant Extension Final Commission Report* published and filed in CEC Docket No. 21-ESR-01 on March 2, 2023 at 10-12.

¹⁸ D.23-02-040 at 25.

“conventional” new project development for standalone and hybrid/co-located lithium-ion battery storage resources.¹⁹

Most recently, the California Independent System Operator (“CAISO”) announced delays in the Phase II study process for Queue Cluster (“QC”) 14 projects in the transmission interconnection queue, which, in turn, will result in delays to the start of processing of QC 15 interconnection requests by one year (*i.e.*, April 2024) that were submitted in the April 2023 application submission window.²⁰ Any LLT resources in the current queue face the risk of a significant delay, even though the IRP compliance deadline would be extended to 2028. With D.21-06-035 being issued *after* the opening of QC 14 in April 2021, some LLT resources seeking to compete for the MTR procurement requirements may have awaited the clear market signal from the Commission on LLT resource categories and may have therefore anticipated entering QC 15, which is further backlogged behind the current supercluster. Although the interconnection queue backlog and delays affect all project and resource types, it may be particularly impactful for LLT resources that inherently have long lead times and unique procurement barriers for various reasons. Similar delays are not uncommon in other CAISO Queue Clusters, resulting in a knock-on effect on development stage gating affecting many LLT resources, despite their longer expected in-service timelines.

If such deployment challenges apply to more routine resources, the same challenges are compounding for factors for many LLT resources that, for assorted reasons, maybe

¹⁹ See, e.g., Resolution E-5243 issued on December 9, 2022 delaying initial delivery dates for four energy storage contracts procured by PG&E. See also, e.g., CPA Board approval on July 7, 2022 of amendments to COD for several power purchase agreements.

²⁰ *2023 Interconnection Process Enhancements: Track 1 Final Proposal* published by CAISO on April 13, 2023 at 6-7.

more complex to develop/contract and/or must overcome growing pains related to a first-of-a-kind commercial project. While many non-lithium LDES technologies present opportunities to diversify supply chain and project execution risks by sourcing different commodities and materials (e.g., iron for flow or metal-air batteries) and/or using unique configurations and design to provide storage capabilities (e.g., caverns for compressed air energy storage),²¹ inflation, supply chain uncertainties persist for commodities and equipment used for these LDES technologies, in addition to the knock-on effects of ongoing first-of-a-kind California-based development needs for permitting and interconnection of these resources. There are certain uncertainties and risks applicable to all resource types, including the cost of capital and labor costs. These factors outside of the control of either the buyer or seller (e.g., interconnection, supply chain, permitting approvals, import allocation rights) were cited in several of the LSE’s IRP filings submitted on February 1, 2023.²²

Overall, a challenging macroeconomic environment adds to the contracting and development difficulties of LDES resources, which were categorized within the LLT resource category for a reason. That is, having seen little or no new resource development for technologies other than solar, wind, and lithium-ion battery storage, the Commission acknowledged that “the commercial interest shown thus far in diverse and LLT resources

²¹ *Grid Energy Storage: Supply Chain Deep Dive Assessment* published by DOE on February 24, 2022 at 38-46.

²² See Cape Station extension request at Appendix B in *Clean Power Alliance of Southern California’s 2023 Integrated Resource Plan Procurement Data Update [Public Version]*. See, e.g., also extension requests made by Peninsula Clean Energy (“PCE”), San Diego Gas & Electric Company (“SDG&E”), Direct Energy Business (“DEB”), Phase 3 Renewables, and Constellation New Energy (“CNE”) citing supply chain concerns, commodity price volatility, and potential for better pricing as reasons. Note that, due to the redactions of many portions of the filings, it was not possible to cite all instances and reasons for any extension requests for LLT resources.

that can be online by 2026 may be limited.”²³ It is therefore reasonable to expect that LLT resources that were recognized as needing long lead times in a more positive (or less stressed) macro-economic environment to potentially need additional time to achieve commercial operations in a more stressed macro-economic environment (i.e. even beyond the June 2028 revised COD compliance requirement, given these continually evolving conditions). For greater clarity, LLT resources continue to target the June 2028 revised COD compliance requirement, but lack of flexibility on this date despite demonstrable “good faith” efforts by proponents will complicate the near-term financing required to successfully implement these projects.

Despite these circumstances and some of the inherent uncertainties of LLT resources, the LSE can still increase the viability of bringing LLT resources online if granted an early and upfront extension upon demonstration of good-faith efforts. With some risks already inherent by the very nature of many LLT resources, the Commission should allow LSEs to make early and upfront extension requests if necessary to sufficiently de-risk the LLT project and bring Commission-recognized resource diversity to support reliability needs and decarbonization goals.

B. Upfront and early submission and granting of case-by-case extension requests beyond June 1, 2028 will facilitate certainty in the financing of LLT projects and thus facilitate contracting and procurement of LLT resources.

By extending the LLT compliance deadline, the Commission explained that this change would obviate the need for the approval of any extension requests by LSEs that anticipated not making the original 2026 online date in D.21-06-035.²⁴ Simultaneously,

²³ D.21-06-035 at 36.

²⁴ D.23-02-040 at 28.

the Commission affirmed that potential compliance penalties and/or backstop procurement may be triggered for any LLT procurement deficiencies at the June 1, 2027 and June 1, 2028 compliance filing deadlines,²⁵ modifying previous determinations that no penalties would be assessed depending on the demonstration of good-faith efforts,²⁶ defined through several categories of evidence that could be provided.²⁷ In making these changes, the Commission affirmed the importance of LSE procurement responsibility and experience with diverse resources and left room for case-by-case determinations against good-faith efforts but stopped short of adopting upfront relief or clarity on the penalty structure.

While overall appreciative and supportive of these changes, CESA and WPTF believe that further clarification and refinement is needed as the current rules and requirements as adopted in D.23-02-040 is still characterized by uncertainties that lead to difficulties in contracting for, financing, and/or building diverse LLT resources. A case-by-case determination of good-faith efforts is appropriate given the range and needs of different types of LLT resources, but CESA and WPTF believe that earlier and upfront clarity would be beneficial to facilitate the contracting and procurement of diverse LLT resources that may need further lead time as a means to mitigate delay risks (and facilitate the successful near-term financing of these resources that is required to meet these later-decade COD timelines), many of which may be outside the control of the LLT technology provider and developer, or others that may be inherent in the new and novel nature of the resource type (*e.g.*, permitting for a new technology or resource type at state or local agencies that are less familiar or has no precedent). LSEs would strive to bring LLT

²⁵ *Ibid* at 32-33 and 35-37.

²⁶ D.21-06-035 at 61-62, 74, and COL 12.

²⁷ *Ibid* at 75-76.

resources online by June 1, 2028, but the many potential sources of delay risk create untenable risks for both sellers in financing projects and buyers in facing potential unknown compliance penalties and/or backstop costs dependent on Commission staff's assessment of good-faith efforts.

Rather, having earlier and upfront assurance that the COD can be extended beyond June 1, 2028 in anticipation of potential deployment contingencies, or the alternate, that penalties will not be assessed and associated costs will not be triggered for potential delay beyond the June 1, 2028 compliance deadline would provide greater assurances of contracting for, procuring, and financing of LLT resources. In turn, it would allow the potential risks and costs to be known in advance (*i.e.*, including bridge capacity contingencies) and to be allocated accordingly in the off-take contract. Absent advanced knowledge of these risks and costs, both sides are often unable to reach an agreement on the terms and conditions of the off-take contract, and proponents may have difficulty in securing successful financing of the LLT assets that thereby enables later-decade CODs to be achieved. For greater clarity, this is why immediate action is required on flexibility to extend COD timeframes, without incurring any undue delay on contracting timelines – *i.e.*, procurement and contracting timelines must be maintained for LLT resources, otherwise LSEs risk a knock-on effect of further COD and financing risk down-the-line. Furthermore, as aptly stated by EDF Renewables in comments, LSEs would have enhanced confidence in pursuing and procuring LLT resources, which are “not easy to opt for other, long lead time projects to fill the gap in time to meet the reliability-driven authorization provided by the Commission” if the LLT project fails to meet milestones or face sources

or risks of delay outside of their control.²⁸ To illustrate further along these lines, suppose a particular LLT resource is procured in 2023 and has a 5-year lead time to come online in 2028; yet, despite good-faith efforts, it is later realized in 2025 that the LLT resource will come online in 2029 instead due to factors outside of their control (*e.g.*, interconnection, permitting delays, supply chain), the LSE would have few options to mitigate LLT compliance deficiencies, such as with alternative LLT resources that have very long lead times by their very nature. In such cases, LSEs may not pursue such LLT resources altogether or make terms and conditions untenable to be financed and contracted. Given the more limited market for LLT resources and the less liquid substitutability of LLT resources in general, the Commission should de-risk factors that would otherwise disincentivize LSEs from pursuing certain LLT resources due to the higher risk of compliance delay, penalties, and costs.

To these ends, extension requests should be allowed to be submitted at any time in advance of the June 1, 2027 and June 1, 2028 compliance filings to allow for these contingencies and, in effect, have determinations of good-faith efforts made earlier to provide upfront certainty around compliance risks and costs. Along these lines, since these extension requests are to be made as contingency measures and not to necessarily extend compliance deadlines altogether, the applicable evidence for good-faith efforts in D.21-06-035 for such requests may need to be refined or limited to evidence of at least two of the following: an executed contract, evidence of site control, an interconnection agreement, and/or notice to proceed. These pieces of evidence demonstrate that the LLT resource is, for all intent and purposes, proceeding to move forward to meeting a commercial operation

²⁸ *EDF Renewables, Inc. Comments on Mid-Term Reliability Analysis and Proposed Procurement Requirements* filed on March 26, 2021 in R.20-05-003 at 3.

date on or before June 1, 2028 but would only need an “extension” for contingencies associated with deployment delays (*e.g.*, interconnection, permitting, network upgrades, macro-economic factors). By contrast, evidence of a solicitation or bids in a solicitation in this advanced showing and request to Commission staff should not suffice for a contingency-related extension for LLT resources since these pieces of evidence are more related to the unsuccessful solicitation of LLT resources altogether, which is still within the control of the LSE to continue with its good-faith efforts up and through the compliance filings due on June 1 of 2027 and 2028. In such cases, LSEs would still be in the initial stages of fulfilling their procurement obligations and would still have an opportunity to continue to make efforts to solicit and procure resources, unlike LSEs that have successfully procured LLT resources that, at that point, mostly face deployment delay risks. However, for greater clarity, it is critical for the successful implementation of LLT resources by later decade COD timeframes, that procurement timelines are maintained in the near term by LSEs and therefore warrant immediate action on this COD flexibility.

In sum, upfront and early opportunities to make contingency-related extension requests are critical to providing certainty for LSEs and sellers to move forward with contracting and make known the risks and costs with compliance. CESA and WPTF, therefore, recommend that the Commission grant the Petition.

C. Upfront and early submission and granting of case-by-case extension requests will maintain the baseline requirement that LLT resources be online by June 1, 2028, if not earlier.

In this Petition, CESA and WPTF simultaneously recognize that the Commission wishes to frontload or accelerate procurement given the immediate and mid-term reliability

risks as detailed in D.21-06-035 and D.23-02-040.²⁹ As such, CESA and WPTF understand that the Commission may not wish to just extend the LLT compliance deadline to June 1, 2031 for all LLT procurement, especially if certain LLT resource types could come online earlier and support identified reliability needs. Specifically regarding LDES-related LLT resources, there certainly are technology types that are commercially ready today or in the very near future and could be deployed on earlier timeframes (e.g., 2024-2027 period).³⁰ To the degree that LSEs find it cost-effective, preferable, and achievable to procure LLT resources earlier and given the Commission’s preference for earlier procurement where possible, CESA and WPTF agree that the Commission may not wish to set a minimum compliance requirement that is later than necessary if some portion of the LLT resources could come online earlier.

In this context, the Petition aims to narrowly address the specific cases where upfront and early extension requests beyond June 1, 2028 may be needed, and where LSEs demonstrate early action on procurement and contracting (e.g. conditional or executed contract by no later than June 1, 2025). As the CAISO aptly explains, the Commission should consider procuring LLT resources *at least* seven years in advance, if not further in advance for certain geographically specific resources [*emphasis added*].³¹ Therefore, LSE

²⁹ See, e.g., D.21-06-035 at 23-24: “It is generally ***preferable to bring resources onto the system a little ahead of when they are needed*** rather than have an emergency situation in real time... However, a countervailing consideration is the retirement of Diablo Canyon that will represent two large amounts of capacity retiring in short order in 2024 and 2025” [*emphasis added*]. See also D.23-02-040 at 26 where the Commission opted to accelerate Cal Advocates’ recommended supplemental MTR procurement by one year to create buffer as a safety precaution.

³⁰ With most of these LDES technology types being modular in nature, the question becomes one of whether they can scale to the levels needed to collectively meet the LDES procurement requirement directed in D.21-06-035.

³¹ *Comments of the California Independent System Operator on the Proposed Decision Ordering Supplemental Mid-Term Reliability Procurement (2026-2027) and Transmitting Electric Resource Portfolios to California Independent System Operator for 2023-2024 Transmission Planning Process* filed in R.20-05-003 on February 2, 2023 at 3-4.

timelines for procurement and contracting must be maintained in the near-term, to ensure the earliest practical COD implementation timeframe for LLT resources and minimize the risk of COD delays (despite the need for flexibility on COD to ensure the viability of project financing). On the one hand, the Commission should be commended for the issuance of D.21-06-035 that had the foresight to consider the need for LLT resources despite most of the attention on near- and short-term capacity needs, but at the same time, the lead time for LLT resources by its very nature was already tight even at that time, which has been compounded by all the factors discussed above. Not all LLT resources will need additional extensions, but having the flexibility to do so is critical to facilitating the procurement and contracting of diverse LLT resources. The relief requested in this Petition still falls short of the seven years that the parties indicated are needed in the best of circumstances, but given the substantial work developers have undertaken, is achievable by 2031.

Additionally, by granting the Petition and allowing certain upfront extensions beyond June 1, 2028, the Commission may still incentivize by the counting rules established in D.21-06-035 of NQC to the MTR procurement requirements by marginal ELCC values.³² Since marginal ELCC values of storage with a particular duration (*e.g.*, 8 hours) decline over time with increasing penetration of storage on the grid,³³ the incremental counting benefits of coming online earlier are present. Granted, the most recent draft 2023 study update showed slight increases over the 2025-2028 study period due to the higher penetration of solar models despite continued storage additions, highlighting the diversity benefits of solar and storage and the sensitivity of ELCC studies to the specific

³² D.21-06-035 at COL 25 and D.23-02-040 at 29.

³³ *See, e.g.*, E3/Astrape 2021 Incremental ELCC Study published on October 22, 201.

inputs and assumptions, but the general “rule of thumb” stands that bringing storage online earlier is better for ELCC counting, holding all things equal. These IRP capacity counting rules should still preserve some LSE incentives to not seek blanket extensions for all of their LLT procurements.

V. THE RELIEF REQUEST IN THE PETITION WOULD MAINTAIN RELIABILITY.

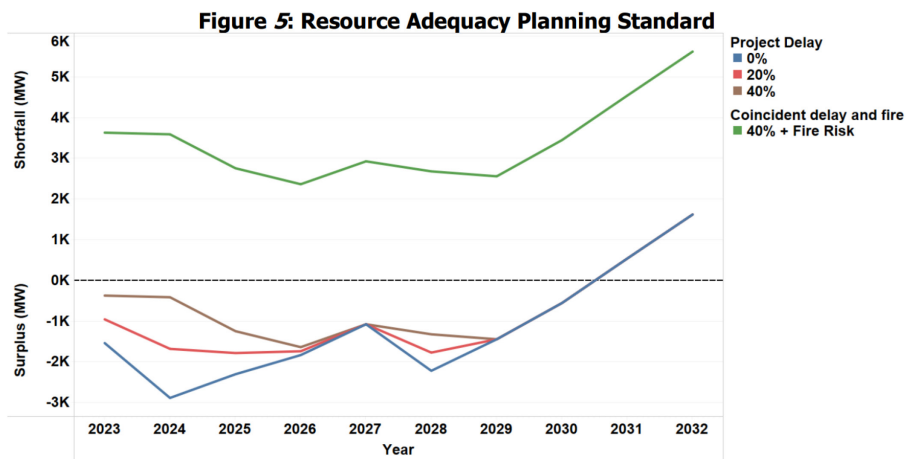
In this section, CESA and WPTF discuss how reliability would be maintained under the intent and goals of D.21-06-035 and D.23-02-040, considering the reliability analyses conducted to date and the insurance measures passed by the Legislature in 2022. CESA and WPTF also discusses the importance of the CPUC establishing a programmatic approach to procurement, to ensure reliability in the mid-and long-term and incentivize the key investments required to achieve California’s clean energy goals.

A. The delayed retirement of Diablo Canyon Nuclear Power Plant (“DCPP”) and emergency reliability programs provide insurance against concerns of further extending certain LLT resources.

With the current and looming reliability risks, the Legislature passed a suite of bills that extended the timeline for retirement of the Diablo Canyon Nuclear Power Plant (“DCPP”) via Senate Bill (“SB”) 846, introduced a statewide Strategic Reliability Reserve (“SRR”) that includes a pool of targeted programs and funds via Assembly Bill (“AB”) 205, and directed the identification of high-priority transmission needs via SB 887, among other things. Collectively, the passage of these laws, programs, and funds provided an additional cushion against reliability and extreme weather risks while signaling to the state agencies that they should not rely on these “insurance policies” and instead be sure their normal planning processes are updated, refined, and/or reformed to ensure both

decarbonization goals are met and reliability is assured. For example, SB 846 dictates that the Commission should model DCPD as unavailable and retired after 2025 for IRP purposes despite authorizing PG&E to seek an extension with the Nuclear Regulatory Commission (“NRC”), and the SRR programs and funds are explicitly targeting emergency capacity that would not otherwise qualify for Resource Adequacy (“RA”).

With this in mind, the delayed retirement of DCPD and the SRR programs and funds provide the very insurance and runway that afford the Commission the flexibility to grant further extension requests if it supports the project viability and successful deployment of LLT resources. Even when the once-through-cooling (“OTC”) and DCPD retirements are modeled in 2023 and 2025, respectively, and 40% of expected lithium-ion battery storage projects are assumed to be delayed, the California Energy Commission (“CEC”) stack analysis under the 17% planning reserve margin (“PRM”) showed that the resources expected from the Commission’s procurement orders (D.19-11-016, D.21-06-035) were sufficient to eliminate shortfalls through 2030, with the one exception being the case where there are simultaneous wildfire risks to transmission lines importing power to California.



Wildfire risks should not be minimized or dismissed, but CESA and WPTF note the combination of temporary DCPD extension, SRR programs and funds, and

supplemental MTR procurement in D.23-02-040 were motivated as contingencies against all of these risk factors and reviewed in totality means that on a case-by-case extension for LLT compliance deadlines beyond June 1, 2028 will likely not jeopardize reliability.

B. The additional procurement in D.23-02-040 provides an incremental 4,000 MW of NQC to safeguard reliability.

The Commission prudently ordered additional incremental capacity to be added to the grid that has earlier compliance dates than the 2,000 MW of LLT at issue in this Petition. This additional capacity will help ensure an additional reliability buffer, allowing for those projects that need additional time to be constructed to not jeopardize reliability. However, it must be noted that the LSEs responsibly prioritized procurement processes that focused first on the earlier MTR mandates and only after those processes were completed, focused on the LLT procurement, and that work is underway now. The amount of work the LSEs have undertaken is Herculean, and they should be commended and given the certainty they need, today, that they can contract for these LLT projects immediately without concern that any slippage outside of their control will adversely impact them and their ratepayers. LSEs need to conclude their procurement processes underway today for LLT resources to focus on this next round of 4,000 MW of procurement expeditiously. The possibility of risks, costs, and contract terminations that loom today in the procurement of LLT leads to protracted procurement processes when we can ill afford it. The LSEs need to be able to confidently pivot to the next tranche of procurement in D.23-02-040 so that those projects have the best chance of meeting the ambitious online dates.

C. Granting the PFM Would Not Require a Change to the Contract Bridging Rules outlined in D.23-02-040 or in any way disrupt LSE procurement efforts in advance of the December 1, 2023 procurement track compliance deadline.

The Commission concluded that it “will not allow bridge resources to serve to support LLT procurement, because we are providing the extension to the deadline for that category instead.” The Commission should apply the same logic in reviewing this Petition. The petitioners also recognize that firm replacement capacity may be necessary for 2028 and a later timeframe, but this will not be known for at least a few years. The bridging rules in D.23-02-040 do not require updating. The actual need for firm capacity in 2028 will not be known until closer to 2028. The Commission has ample time to revisit the need for replacement capacity in future procurement directives ahead of the 2028 and later RA years. In evaluating the need for bridging, the petitioners considered the need to ensure that LSEs have fixed expectations now for procurement compliance by a certain date. LLT contracts would still need to be executed now and LSEs would still need to comply with existing deadlines or face backstop costs. There are ongoing deadlines for compliance in December and June of each year in D.23-02-040 and related decisions. (See D.23-02-040, Conclusion of Law 5) Thus, regardless of whether the Commission grants the petition, LSEs will still need to show or demonstrate their compliance with the LLT tranche by December 1, 2023.

D. The work of the Commission on the Reliable and Clean Procurement Program (“RCPP”) within the IRP proceeding will improve reliability and minimize LLT contracting and deployment delays moving forward.

Just as the delayed retirement of DCPD and the incremental procurement directed in D.23-02-040 would negate the near- and mid-term reliability impacts of the proposed relief, the work of the Commission and its Energy Division (“ED”) regarding the RCPD

will also improve reliability by minimizing the likelihood of contracting and deployment delays moving forward, particularly for LLT resources such as LDES.

As noted previously, the technological novelty of some LLT resources such as LDES will require adequate and concrete market signals to properly scale and deliver the wide range of grid benefits they can in a cost-effective manner. As such, timely development of the RCPP is essential to standardize contracting and development timelines of LLT resources. Specifically, the Commission's development of a programmatic procurement approach will avoid costly, rushed development caused by *ad-hoc*, order-by-order procurement mandates. The RCPP will also be critical to ensure the development of the 44-55 GW of LDES that CESA and Strategen Consulting have found to be needed for California to achieve its 2045 goals.³⁴

Given the relevance of establishing the RCPP in a timely manner, the Commission should seek to finalize a construct that proactively procures resources needed to support California's climate and reliability goals, especially LLT resources like LDES, in a forward-looking manner that will communicate market signals in the mid- and long-term, effectively eliminating the risks created by *ad-hoc* procurement. Thus, CESA and WPTF support the Commission's efforts to develop the RCPP, and request that its formulation and implementation is expedited to ensure the application of a programmatic approach to procurement that can support the development of the emerging LDES and the multi-day storage market.

³⁴ CESA's Long Duration Energy Storage for California's Clean, Reliable Grid Report. Read more here: https://static1.squarespace.com/static/5b96538250a54f9cd7751faa/t/5fcf9815caa95a391e73d053/1607440419530/LDES_CA_12.08.2020.pdf

VI. THE RELIEF REQUEST IN THE PETITION WAS RAISED IN PARTIES' COMMENTS BUT INSUFFICIENTLY ADDRESSED.

In this section, CESA and WPTF detail the procedural considerations in weighing the merits of this Petition. Since this Petition is submitted only months after the issuance of D.23-02-040, CESA and WPTF seek to explain why this narrow issue was not able to be fully developed in the record when first raised at the Proposed Decision stage in January 2023 in Rulemaking (“R.”) 20-05-003 because of the wide range of other important issues that needed to be addressed within the constraints of opening and reply comments to the Proposed Decision that would be revised and adopted as D.23-02-040. As shown in this Petition, the full details and scope of the background, proposal, and rationale could not be feasibly included in comments to the Proposed Decision.

A. The Commission declined to extend the LLT compliance deadline to 2030 based on arguments related to federal tax credits but did not address certain cases where extension beyond June 1, 2028 could nonetheless be considered and allowed and still meet the goals of D.21-06-035.

In comments to the Proposed Decision that resulted in D.23-02-040, several parties advocated for the LLT compliance deadline to be extended to 2030 if good-faith efforts can be demonstrated. CESA and WPTF specifically cite the complexity of developing some LLT resources, the potential to leverage Inflation Reduction Act (“IRA”) incentives, and the delayed retirement of DCPD as reasons to allow 2030 compliance deadlines for LLT resources if good-faith efforts can be demonstrated.³⁵ The other parties addressing

³⁵ *Comments of the California Energy Storage Alliance on the Proposed Decision Ordering Supplemental Mid-Term Reliability Procurement (2026-2027) and Transmitting Electric Resource Portfolios to California Independent System Operator for 2023-2024 Transmission Planning Process* filed in R.20-05-003 on February 2, 2023 at 5-6.

this issue echoed the potential to take advantage of IRA benefits³⁶ or cited the prolonged or delayed interconnection process.³⁷

However, the Commission declined to delay the LLT compliance deadline further to 2030 specifically due to the benefits that could be captured from the Inflation Reduction Act (“IRA”) of 2022, which offers a wide range of tax credits and bonuses and program funds for different technologies and project attributes – which, for greater clarity, improves project success due to the benefits it provides to near-term LLT project financeability. Important guidance and implementation details will come out from the U.S. Treasury Department over the coming months that could have a substantial impact on the costs and attributes of LLT projects in California, but the Commission found the delay of the LLT compliance deadline beyond June 1, 2028 to be unnecessary since more LLT resources may be ordered in future procurement orders upon further evaluation.³⁸

Notwithstanding the rejection of these recommendations on the aforementioned grounds or the general support for additional LLT procurement in the future, CESA and WPTF make the case in this Petition that there are additional reasons to allow for early and upfront extensions beyond June 1, 2028 on a case-by-case basis. Whether or not IRA benefits are captured by LLT resources directed for procurement in D.21-06-035, extensions beyond 2028 could have the benefit of expanding the competitive pool for LLT

³⁶ *Comments of the Green Hydrogen Coalition on the Proposed Decision Ordering Supplemental Mid-Term Reliability Procurement (2026-2027) and Transmitting Electric Resource Portfolios to California Independent System Operator for 2023-2024 Transmission Planning Process* filed in R.20-05-003 on February 2, 2023 at 3.

³⁷ *Comments of Fervo Energy Company on Proposed Decision Ordering Supplemental Mid-Term Procurement* filed in R.20-05-003 on February 2, 2023 at 3.

³⁸ D.23-02-040 at 71.

resources and successfully achieving the existing LLT procurement directives without jeopardizing reliability.

B. CESA and WPTF were unable to provide the information and rationale underpinning this Petition into the Commission’s record due to the recency of many competitive solicitations seeking LLT resources.

With most, if not all, LSEs focused on short-term system reliability needs under D.19-11-016 and D.21-06-035 to address procurement obligations in the one- to three-year ahead timeframe, CESA has observed that many competitive solicitations have not begun to pursue offers and proposals to LLT resources until last year (2022) as part of “Phase 2” or “Phase 3” or as dedicated solicitations. Even if solicitations were launched early last year in pursuit of any type of new resource required under D.21-06-035, LSEs likely focused on first evaluating bids/proposals and conducting contract negotiations for nearer-term procurement obligations (2023-2025), likely for generic capacity from solar, wind, and lithium-ion battery storage resources. Such a focus on nearer-term procurement obligations is rational and expected, especially with the competition for viable new resource supply being high.

As a result, many of the specific and/or unique lessons learned on challenges and barriers for LLT resources are just recently surfacing, which made this information unavailable or not well understood at the time to submit into the Commission’s record in response to the Administrative Law Judge (“ALJ”) Ruling in September 2022, or at earlier opportunities. The lack of contracted LLT resources in publicly available compliance filings and announcements is further evidence of this effect. With insights more recently coming to light on how early and upfront extensions are needed for diverse LLT resources to be successfully financed, contracted, and built, CESA and WPTF recommend that the

Commission consider the circumstances under which this Petition is being submitted at this time rather than at earlier opportunities made available by the Commission and therefore respectfully request that the Commission rule on this Petition on the merits of the relief requested rather than on procedural grounds.

VII. CONCLUSION.

For the above reasons, CESA and WPTF believe the Petition is justified and should be granted the requested relief as soon as possible. CESA and WPTF appreciate the opportunity to submit this Petition and look forward to working with the Commission and other stakeholders in this proceeding.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Sergio Dueñas". The signature is fluid and cursive, with a large initial "S" and a distinct "D".

Sergio Dueñas
Policy Manager
CALIFORNIA ENERGY STORAGE ALLIANCE

Date: May 30, 2023

Appendix A:
Proposed Modifications to D.23-02-040 and D.21-06-035

Proposed Modifications to D.23-02-040

Note that edits, additions, or removal are **bolded** and underlined.

Findings of Fact

FOF 10. As already contemplated in D.21-06-035, some LSEs may need until 2028 **or later** to procure the LLT resources specified in that decision.

22. Development of a programmatic framework for procurement within the IRP proceeding is in the best interest of ratepayers as it will avoid the need for ad-hoc procurement directives.

Conclusions of Law

9. Import contracts from any resource and with any counterparty should be allowed to be used as bridge resources until new resources can come online for the general procurement category **or long lead-time procurement** identified in D.21-06-035 or the procurement required in this order, and not including Diablo Canyon replacement capacity ~~**or long lead-time procurement**~~ ordered in D.21-06-035, for a period of not more than three years. Imported energy used for this purpose should be allowed to count as long as it meets current resource adequacy requirements at the time the contract is executed.

24. The Commission shall continue to develop the programmatic framework for procurement in IRP in this proceeding and consider it a near-term priority for 2023-2024.

Order

2. All load-serving entities (LSEs) required to procure capacity by Decision (D.) 21-06-035 shall procure an additional combined total of 2,000 megawatts (MW) of September net qualifying capacity (NQC) from non-emitting, storage, and/or renewable resources in 2026 and 2027, with resources required to be online by June 1 of each year. The long lead-time resources required by D.21-06-035 may be brought online by June 1, 2028, such that the total NQC of all LSEs adds to 2,000 MW in each of the years 2026, 2027, and 2028. Commission staff are not required to evaluate or approve extension requests to postpone long lead-time resource procurement to 2028. The extension to June 1, 2028 for long lead-time resources is authorized for all load serving entities. **If further extension is needed for long lead-time resources to come online after June 1, 2028 but no later than June 1, 2031, Commission staff will evaluate and may approve extension requests submitted by load-serving entities, consistent with the requirements to demonstrate good-faith efforts, as defined in Ordering Paragraph 5 in D.21-06-035.**

Proposed Modifications to D.21-06-035

Note that edits, additions, or removal are **bolded** and underlined.

Conclusions of Law

12. If individual LSEs are unable to procure the required LLT resources in this order, it is reasonable for the Commission to allow an extension and/or to require the IOUs to procure the LLT resources to backstop other LSEs, and have the costs allocated according to the modified CAM that will be forthcoming in this proceeding. **If individual LSEs are able to procure the required LLT resources in this order but require an extension to account for deployment delays, it is reasonable for the Commission to allow an extension and not apply penalties or require the IOUs to procure the LLT resources to backstop other LSEs. Determinations on penalties and/or backstop procurement would be assessed against the new applicable date of the approved extension request.**

Order

5. All load-serving entities named in Table 6 of this order, plus the individual electric service providers who will receive their allocations confidentially from Commission staff, shall submit evidence of a good faith effort by February 1, 2023 to procure long lead-time (LLT) resources defined in Ordering Paragraph 2. The Commission will decide after the February 1, 2023 milestone filing whether to allow an extension up to June 1, 2028 for the LLT resources to come online, or whether to order backstop procurement of the LLT resources. Evidence of a good faith effort shall include, but may not be limited to, at least two of the following:

- (a) Evidence of a solicitation;
- (b) Evidence of bids in a solicitation;
- (c) An executed contract;
- (d) Evidence of site control;
- (e) An interconnection agreement; and
- (f) A notice to proceed.

Requests for extensions in advance of the LLT compliance deadline may be made with evidence of a good faith effort including, but may not be limited to, at least two of (c)-(f) evidence above.

Appendix B:

Declaration of Sergio Dueñas in Support of Petition for Modification of
Decisions 23-02-040 and 21-06-035 the California Energy Storage
Alliance and Western Power Trading Forum to Address Long Lead-
Time Resource Compliance Deadlines

**DECLARATION OF SERGIO DUENAS IN SUPPORT OF PETITION FOR
MODIFICATION OF DECISION 23-02-040 AND 21-06-035 OF THE CALIFORNIA
ENERGY STORAGE ALLIANCE AND THE WESTERN POWER TRADING FORUM
TO ADDRESS LONG LEAD-TIME RESOURCE COMPLIANCE DEADLINES**

I, Sergio Dueñas, am the Policy Manager for the California Energy Storage Alliance (CESA). Having worked for CESA for over four years, I am currently managing policy and regulatory affairs for CESA and its over 110 member companies. My business address is 10265 Rockingham Dr. Suite #100-4061, Sacramento, California 95827. On behalf of CESA and WPTF, I declare under penalty of perjury that the foregoing facts in this document are true and correct.

Executed on May 30, 2023, at Sacramento, California.

A handwritten signature in black ink, appearing to read "Sergio Dueñas", written in a cursive style. The signature is positioned above a solid horizontal line.

Sergio Dueñas