

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

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

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

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE
ORDER INSTITUTING RULEMAKING TO CONTINUE ELECTRIC INTEGRATED
RESOURCE PLANNING AND RELATED PROCUREMENT PROCESSES**

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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 comments on the *Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes* (“OIR”), issued by the Joint Commissioners on May 14, 2020.

I. INTRODUCTION.

CESA appreciates the Commission’s persistent efforts to further refine and continue the work that has been done within the Integrated Resource Planning (“IRP”) framework but considers it essential to establish a clearly defined successor Rulemaking (“R.”) 16-02-007 in order to ensure the achievement of the goals set by the Legislature in Senate Bill (“SB”) 350 and SB 100.¹ CESA is generally supportive of the proposed scope and definition of this Rulemaking. Given the experience that developers and buyers have had complying with the procurement directed in Decision (“D.”) 19-11-016, CESA is pleased with the Commission’s determination to formally define a separate, parallel procurement track within this Rulemaking from the onset. CESA also

¹ OIR at 2.

commends the Commission for its consideration of specific modeling modifications within the planning track, such as the adjustment of the default planning horizon. While the OIR does include substantial and beneficial changes from the structure and process in R.16-02-007, CESA continues to find areas of potential improvement and encourages the Commission to consider the following recommendations:

- The Commission should extend the IRP planning horizon to 2045 in support of SB 100 goals.
- The Commission should revise the mapping guidelines for energy storage resources in order to include social and environmental outcomes.
- The Commission should make the retirement or hybridization of natural gas assets a priority of the IRP process.
- The Commission should focus on long-duration storage issues in a dedicated sub-track and differentiate the procurement barriers faced by technology or resource type to meet 2026 and 2030 needs.
- The Commission should issue a procurement Decision before the end of 2020 to address the retirement of Diablo Canyon Power Plant.

II. THE COMMISSION SHOULD EXTEND THE IRP PLANNING HORIZON TO 2045 IN SUPPORT OF SB 100 GOALS.

In the OIR, the Commission states that several modifications to the current IRP framework shall be considered in the planning track of R.20-05-003.² Specifically, the Commission mentions the possibility of expanding the planning horizon of the IRP process to at least 2035 in preparation for the 2045 goals associated with SB 100.³ CESA agrees with the Commission's determination that extending the planning horizon is necessary; nevertheless, the planning horizon should be further extended beyond 2035.

² *Ibid* at 7.

³ *Ibid* at 8.

California’s ambitious goal to effectively decarbonize the electric sector by 2045 will require adaptative planning and unprecedented procurement. While CESA considers that the IRP’s iterative process is well equipped to accomplish this target in a timely manner, the establishment of a planning horizon that ends before 2045 could significantly overlook the investments and decisions needed to meet the objectives of SB 100. The potential for a misrepresentation of future needs has already been established in R.16-02-007, where the Energy Division found considerable differences between the resource buildouts resulting from ending modeling in 2030 versus ending modeling in 2045.

Furthermore, establishing 2045 as the default planning horizon for the IRP proceeding will further the alignment between this Rulemaking and the efforts currently carried out by the Commission, the California Energy Commission (“CEC”), and the California Air Resources Board (“ARB”) (together, “the Joint Agencies”) within the SB 100 Joint Agency Report. By focusing on the same target-year, the Commission’s IRP process would be better equipped to adapt its modeling guidelines based on the Joint Agency Report’s considerations as well as inform stakeholders on the estimated procurement need, years in advance. Even with the uncertainties of looking to a such a long time horizon, the Commission may also need to make some least-regrets and forward-looking decisions around gas system planning (R.20-01-007), transmission investments, and new/emerging technology transformation and procurement to ultimately meet the state’s long-term objectives.

III. THE COMMISSION SHOULD REVISE THE MAPPING GUIDELINES FOR ENERGY STORAGE RESOURCES IN ORDER TO INCLUDE SOCIAL AND ENVIRONMENTAL OUTCOMES.

In the OIR, the Commission states that the planning track of R.20-05-003 shall consider modifications to the methodologies for geographic busbar mapping of portfolios for the purposes

of the California Independent System Operator’s (“CAISO”) Transmission Planning Process (“TPP”).⁴ Furthermore, the OIR notes that an Administrative Law Judge (“ALJ”) Ruling seeking comments on additional information on busbar mapping methodologies would be issued by September 2020.⁵ CESA fully supports this scope and proposed schedule while urging the Commission to place particular emphasis on the mapping guidelines for energy storage resources. CESA considers that the refinement of mapping guidelines for storage assets is timely, as the current approach has been proven to limit the feedback between the IRP and TPP processes.

In previous iterations of the IRP process, the Commission has not provided a detailed methodology for mapping battery storage within the TPP; instead, the mapping of battery resources has been limited to market-interest metrics (*e.g.*, amount of storage in the CAISO interconnection queue). Considering that the most recent 46 and 38 million metric ton (“MMT”) greenhouse gas (“GHG”) scenarios include 8.8 GW and 9.7 GW of incremental battery storage capacity by 2030, respectively, the development of detailed methodologies is essential to signal to developers and buyers where storage would provide the most system and local. Notably, the lack of clear mapping guidelines for energy storage assets was cited as one of the reasons why CAISO advised against the use of the most recent Reference System Portfolio (“RSP”) as the base cases for the TPP.⁶

In order to initiate the development of a stakeholder-vetted mapping methodology for battery storage, CESA recommends that the Commission focus on the consideration of societal and environmental outcomes. More specifically, the Commission should prioritize the siting of

⁴ OIR, at 7.

⁵ *Ibid* at 12.

⁶ *2019-2020 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning* (D.20-03-028) at 69.

energy storage within disadvantaged communities (“DACs”) and within local areas and/or sub-areas with the most significant levels of local emissions (*i.e.*, Version 3.0 of the CalEnviroScreen). With storage mapped to environmental justice and decarbonization objectives, the forward-looking storage needs would also be positioned to provide local reliability and support the orderly retirement of fossil generation while aligning the IRP with the annual TPP process, RA Program, and SB 100 modeling efforts.

Additionally, the inclusion of these outcomes within the mapping of storage assets is in line with the fact that many storage technologies are flexible and capable of being sited in diverse locations within the electric grid. Furthermore, these siting factors would shed light on potential transmission upgrades or investments that would benefit California’s most vulnerable populations.

IV. THE COMMISSION SHOULD MAKE THE RETIREMENT OR HYBRIDIZATION OF NATURAL GAS ASSETS A PRIORITY OF THE IRP PROCESS.

In the OIR, the Commission states that one of the immediate priorities within R.20-05-003 shall be the Preferred System Plan (“PSP”).⁷ Currently, the PSP is generated via the aggregation of the IRPs filed by each individual IRP. In D.20-03-028, the Commission established that, for the 2019-2020 IRP cycle, load-serving entities (“LSEs”) must file a Standard Plan including two Conforming Portfolios, with one portfolio conforming to the 46 MMT GHG target in 2030, and a second portfolio conforming to the 38 MMT GHG target in 2030.⁸ In the same Decision, the Commission established that it would use both of the portfolios filed by LSEs in the aggregation process necessary for the establishment of the PSP.⁹ While the filing of two different portfolios is

⁷ OIR at 7.

⁸ *2019-2020 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning* (D.20-03-028) at 107.

⁹ *Ibid* at 100.

reasonable and provides LSEs with flexibility, the Commission should strive to provide guidelines on how LSEs can comply with the 38 MMT GHG scenario of the Reference System Plan (“RSP”), especially if this scenario is selected for the PSP.

More specifically, since the 38 MMT GHG scenario included the retirement of 2,046 MW of natural gas capacity due to economic and decarbonization factors,¹⁰ clear guidelines are needed on the most effective and economic retirement or hybridization of specific fossil generation facilities in R.20-05-003. The Commission has not established a methodology to identify the specific fossil generation resources that should be retired, nor did it consider whether specific units could be hybridized to reduce emissions due to reduced starts and run time. The identification of assets to retire or hybridize should be a priority issue in R.20-05-003 in coordination with the RA proceeding if local considerations are in play. The Commission could consider a process that prioritizes DACs and areas with significant levels of local emissions. This approach, paired with busbar mapping of energy storage resources, would allow for a more streamlined identification of gas-plus-storage hybridization opportunities, as well as the identification of additional preferred resources needed to facilitate the retirement of key fossil generation facilities.

CESA recognizes that the process to retire capacity in local areas and/or sub-areas would require studies that go beyond the scope of the IRP process. This is particularly true for the identification of resources necessary to retire natural gas assets that maintain the reliability of specific local areas. Because of these limitations, CESA recommends that the Commission coordinate with the RA proceeding and the CAISO to develop the studies and analyses necessary to identify natural gas resources that could be better positioned for hybridization or retirement. Resulting analyses from the RA and CAISO planning processes should be considered within the

¹⁰ *Ibid* at 46.

procurement track of this proceeding and evaluate the preferred resources necessary to support the retirement or hybridization of natural gas capacity.

V. **THE COMMISSION SHOULD FOCUS ON LONG-DURATION STORAGE ISSUES IN A DEDICATED SUB-TRACK AND DIFFERENTIATE THE PROCUREMENT BARRIERS FACED BY TECHNOLOGY OR RESOURCE TYPE TO MEET 2026 AND 2030 NEEDS.**

CESA commends the Commission for explicitly mentioning the need to consider procurement issues associated with long lead-time resources, as well as issues associated with resources whose development may require involvement of multiple LSEs in order to be viable.¹¹ Given that the RSP selects almost 1 GW of pumped hydro storage (“PHS”) or long-duration storage by 2026, this issue merits the consideration in this track to inform timely procurement directives and to support the development of collective procurement, contracting, and cost allocation mechanisms. In doing so, the Commission should consider the procurement issues for any resource, beyond just PHS, that may require collective procurement (*e.g.*, hydrogen storage). At the same time, CESA notes that developing such a procurement mechanism does not necessarily mean that such large-scale projects should be directed in the procurement track; rather, having such a mechanism in place is prudent if or when the Commission determines it optimal or necessary to procure a large-scale project in a timely manner to meet its planning objectives.

Additionally, CESA wishes to correct the OIR’s characterization of long-duration storage as “long lead-time resources” since that is not the case for all long-duration storage resource types.¹² In defining this issue or sub-track, the Commission may wish to frame long lead-time issues as those involving long procurement timelines or collective procurement and cost recovery,

¹¹ OIR at 10.

¹² *Ibid* at 10.

as opposed to those involving policy or market transformation. The latter, for example, could involve long-duration storage technologies that need additional market products or policy changes to be economic viable and deployed, or that need an evaluation to procurement barriers (*e.g.*, short turnaround solicitations, technology viability criteria).

Overall, the Reference System Plan has identified a clear need for long-duration storage, which is represented by a wide range of technologies and thus entail different sets of procurement barriers. Given this variety, though issues around long-duration storage merit its own sub-track, procurement barriers and solutions should be tackled in a comprehensive way, beyond the narrow consideration of long lead times.

VI. THE COMMISSION SHOULD ISSUE A PROCUREMENT DECISION BY THE END OF 2020 TO ADDRESS THE RETIREMENT OF DIABLO CANYON POWER PLANT.

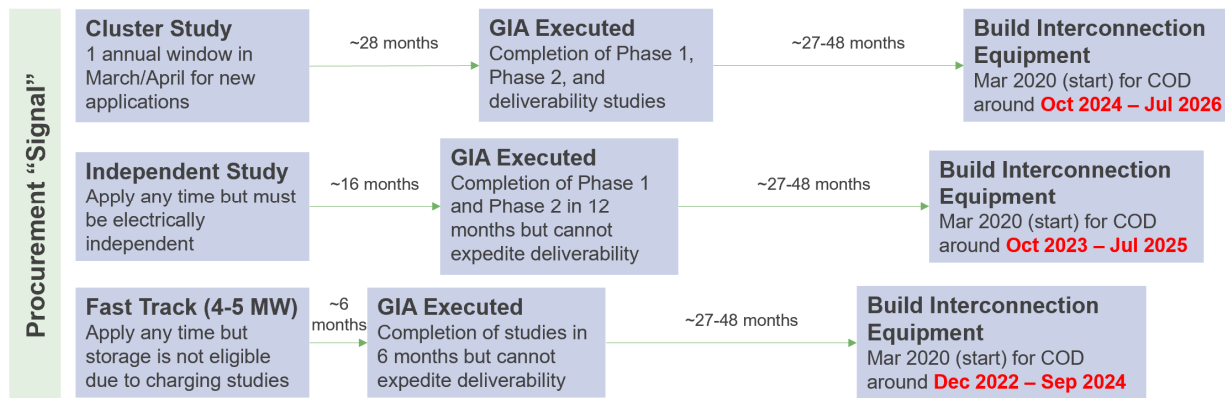
CESA believes that the IRP proceeding is the appropriate venue for the Commission to issue procurement directives that can both guarantee the continued reliability of the electric power system and enable the grid transformation required to achieve California’s ambitious energy and climate goals on a forward-looking basis. In light of the Commission’s decision to operate the procurement track in parallel to the planning track, CESA urges the Commission to issue, by the end of 2020, a decision guiding or directing the procurement of resources set to replace the System RA need currently covered by the Diablo Canyon Power Plant (“DCPP”).

In the ongoing procurement in response to D.19-11-016, members have reported significant challenges in responding to solicitations with short turnarounds to respond and tight timelines to finance, procure equipment, and construct projects ahead of the required 2021-2023 commercial online date. The recognition of the need and issuance of the procurement decision just two or three years ahead of the need date has increased the burden on developers and LSEs, created unnecessary

levels of development risks, and led to a need to expedite contract review processes, which could have been avoided or mitigated with earlier action. To avoid a similar situation, CESA urges the Commission to establish a more orderly and advanced procurement process within the IRP proceeding. Taking decisive procurement action in 2020 would align with the realities of new resource procurement and development timelines.

As CESA stated in comments to D.20-03-028, for a 2026 online date for new resources, a four- to five-year lead time is necessary for resources to conduct competitive solicitations, enter the CAISO cluster study process, seek Commission approval (where applicable),¹³ and build interconnection equipment. Considering the retirement of DCP is set to occur in the 2024-2025 timeframe, a procurement directive is necessary in 2020 in order to avoid disorderly requests-for-offer (“RFO”) processes and suboptimal procurement. Moreover, a timely procurement directive would minimize the risk faced by developers and buyers alike, where many developers who secured contracts in solicitations in response to D.19-11-016 have had to take on significant financial risks. Timely and advanced procurement decisions would also better support normal stakeholder review processes for any resulting contracts and invite greater bidder participation, recognizing that not all resource types or developers can respond with such fast turnarounds to the need date. In order to better illustrate the deployment timelines faced by developers, CESA provides an example project milestone timeline below:

¹³ For storage resources, which represent a significant share of the resource mix going forward, a more streamlined approval process will likely need to be developed. Given the procurement and contracting experience with storage and the increased standardization of storage contracts, the time is ripe to consider more streamlined approval processes (*e.g.*, advice letter filings) for utility-procured storage.



Furthermore, the Commission determined that the need for procurement to replace Diablo Canyon should be addressed in the IRP proceeding with optimal mix of resources that do not increase GHG emissions.¹⁴ The GHG-free capacity that is available for procurement will likely need to come from new-build renewable and storage projects, which require certain levels of lead time to proceed through the interconnection, development, and construction timelines.

Thus, considering that the decommissioning and retirement of DCP is set to occur in 2024-2025, the Commission should consider the issuance of a procurement directive similar to the one in D.19-11-016 but with more lead time to invite broader market participation and competition to meet this need and enable reasonable stakeholder review of resulting contracts.

¹⁴ *Decision Approving Retirement of Diablo Canyon Nuclear Power Plant*, D.18-01-022, issued on January 16, 2018 in A.16-08-006 at Conclusions of Law 2 and 3.

VII. CONCLUSION.

CESA appreciates the opportunity to submit these comments to the OIR and looks forward to working with the Commission and stakeholders in this proceeding.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Alex J. Morris".

Alex J. Morris
Executive Director
CALIFORNIA ENERGY STORAGE ALLIANCE

Date: June 15, 2020