COMMENTS OF THE CALIFORNIA COMMUNITY CHOICE ASSOCIATION TO THE CALIFORNIA ENERGY COMMISSION ON THE DRAFT CEC PRELIMINARY 2022 SUMMER SUPPLY STACK ANALYSIS
August 11, 2021

Docket Number 21-ESR-01
Energy System Reliability

I. INTRODUCTION

The California Community Choice Association (CalCCA)[1] submits these comments to the California Energy Commission (Commission) in Docket 21-ESR-01, on the *Draft CEC Preliminary 2022 Summer Supply Stack Analysis*, dated August 11, 2021 (Stack Analysis). CalCCA appreciates the efforts taken by the Commission to perform this analysis and the opportunity to comment on the assumptions and results.

II. COMMENTS

Recommendation 1: The Commission should favor loss-of-load (LOLE) study results when evaluating the reliability shortfall estimated to occur in summer 2022 and when informing future procurement decisions.

Stack analyses, by their nature, provide only a single point estimate of capacity sufficiency. They thus fail to account for uncertainty about supply, demand, weather, renewable generation, and the complexities of storage dispatch. While stack analyses are a useful data point

[1] California Community Choice Association represents the interests of 22 community choice electricity providers in California: Apple Valley Choice Energy, Baldwin Park Resident Owned Utility District, Central Coast Community Energy, Clean Energy Alliance, Clean Power Alliance, CleanPowerSF, Desert Community Energy, East Bay Community Energy, Lancaster Choice Energy, Marin Clean Energy, Peninsula Clean Energy, Pico Rivera Innovative Municipal Energy, Pioneer Community Energy, Pomona Choice Energy, Rancho Mirage Energy Authority, Redwood Coast Energy Authority, San Diego Community Power, San Jacinto Power, San José Clean Energy, Silicon Valley Clean Energy, Sonoma Clean Power, and Valley Clean Energy.

in identifying the existence of possible reliability issues (i.e. they show that the system may be underbuilt relative to the load under certain assumptions), they are not on their own sufficient for calculating the size of a procurement need, because the result is highly dependent on the input assumptions made.

CalCCA notes that the stack analysis has an enormous range of possible quantities of procurement needed, from 600 MW to 5,200 MW.[2] These figures represent approximately 1 to 11 percent of CAISO peak load in 2020.[3] This large range highlights the limits of stack analyses—it is not clear how to translate this range into a procurement requirement, nor is it clear the level of reliability risk achieved by procuring somewhere within this range. Ratepayers will ultimately bear the cost of this procurement, and they deserve a careful and measured consideration of actual system need rather than broad-brush estimates from a single stack analysis.

In contrast to stack analyses, loss-of-load expectation (LOLE) models capture the complexities of actual system operation, including economic dispatch, must-run generation, and economic imports (which are not included in the Stack Analysis). LOLE models are also capable of modeling many different scenarios, giving a much better picture of actual risk and thus providing more accurate metrics about the probability of a resource shortfall in any given hour, which is crucial information for decision-making.

The CEC issued a *Midterm Reliability Analysis & Incremental Efficiency Improvements to Natural Gas Power Plants* LOLE analysis that examined years 2022-2026 on August 30,

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[2] CEC Stack Analysis at 4. https://efiling.energy.ca.gov/GetDocument.aspx?tn=239251&DocumentContentId=72701

[3] California ISO Peak Load History 1998 through 2020. Peak load in 2020 was 47,121 MW. Available at: https://www.caiso.com/documents/californiaisopeakloadhistory.pdf

2021.[4] The Commission should favor the results of the LOLE analysis when evaluating the reliability shortfall estimated to occur in summer 2022, and when informing future procurement decisions, for the reasons outlined above.

Recommendation 2: The Commission should publish more detailed information about the generating resources used in its analysis, and clarify some of the assumptions made.

Table 2 and Figures 1-3 of the Stack Analysis summarize the set of supply-side resources used in the analysis[5], but they do not provide detailed information that would allow stakeholders to meaningfully evaluate whether this set of resources is appropriate. CalCCA has the following specific requests so that it can assess the appropriateness of these data.

First, the Commission should provide more information about the resources assumed in this analysis. The analysis references "CPUC Procurement of 840 MW by August 2022" and "CPUC Expedited Procurement carry over of 556 MW from 2021," but it is not clear what those resources are, and exactly what CPUC proceedings are being referred to. To the extent this information is confidential, the Commission can aggregate up to resource types to mask it, but getting a more granular picture of the resource mix would help parties to better evaluate the analysis.

Second, the Commission should validate its resource stack versus the 2022 Preliminary CAISO NQC list[6]. In theory, all or nearly all the resources used in this analysis should be on this list.

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4 https://efiling.energy.ca.gov/GetDocument.aspx?tn=239554&DocumentContentId=72991

5 CEC Stack Analysis at 3-7.

6 http://www.caiso.com/Documents/Draft-Final-Net-Qualifying-Capacity-Report-for-Compliance-Year-2022.xls

Third, the Commission should clarify why an additional 1,500 MW of hydro derates[7] are being applied on top of the hydro's Net Qualifying Capacity (NQC) value. NQC should already capture drought conditions, because it is derived using a rolling average of actual historical hydro generation data, some of which will contain drought years. Although CalCCA understands that the Commission wishes to model a system that is much dryer than this rolling average, it should describe why 1,500 MW is an appropriate number to be applied on top of the NQC amount.

Fourth, the Commission should quantify the amount of demand response assumed, and explain why it is appropriate.

Fifth, the Commission should publish the charts in tabular form to allow stakeholders to review.

Sixth, for consistency with the rest of the analysis (which assumes that droughts reduce pumping load and hydro capacity), the Commission should revisit its assumptions on imports. The analysis currently uses an average of resource adequacy (RA) import showings from 2015-2020, and appears to use a single imports value in Figures 1-3, regardless of the month.[8] This single value does not account for variation in imports across months[9], does not count economic imports (which are likely to be greater than zero), and ignores the fact that there is likely less import capacity available in drought months. Figure 1, shown below, shows historic California

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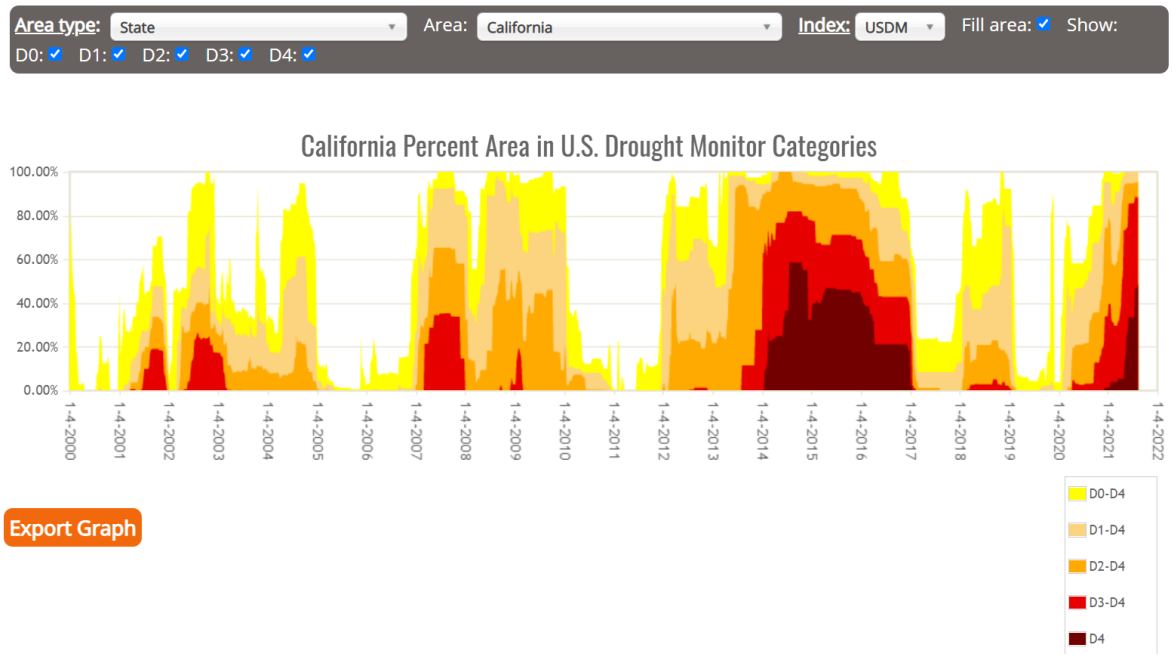
7 CEC Stack analysis at 3.

8 CEC Stack analysis at 5-7.

9 Across-month variation is substantial—according the CPUC's 2019 RA report, in July, August, and September, import RA was 4,901 MW, 3,968 MW, and 4,737 MW respectively. This is a difference of 933 MW between the largest and smallest value. CPUC 2019 Resource Adequacy Report at 15, Table 4. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/resource-adequacy-homepage/2019rareport-1.pdf

drought data from the US Drought Monitor, with darker colors indicating more severe drought.[10] 2014-2016 are abnormally dry years, with more exceptional droughts, and are thus the most appropriate for evaluating available imports under drought conditions. Using an average from 2015-2020 likely overstates import availability, as it captures both dry and wet years.

Figure 1: Drought Data in California



Therefore, CalCCA recommends using specific monthly values based on RA Import data from July-Sep in the dry years of 2014-2016, and counting economic imports as well.

Seventh and finally, the Commission should confirm whether its analysis includes or does not include publicly-owned utility (POU) loads and resources in the CAISO footprint. POU load represents approximately 9 percent of load in the CAISO footprint,[11] and it is important that

[10] Data is from https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx for California. The color scale in the legend consists of the following categories: D0 (Abnormally Dry), D1 (Moderate Drought), D2 (Severe Drought), D3 (Extreme Drought), and D4 (Exceptional Drought).

[11] https://www.cmua.org/2021-issue-brief-electric-relaibility "Collectively, POUs serve about 9 percent of the electric load in the CAISO system."

any procurement order that is applied to CPUC-jurisdictional LSEs (i.e. not POUs) take this into account.

Recommendation 3: The Commission should clearly identify what would count as incremental to the new procurement requirement.

From the Stack Analysis, it is not clear what types of resources could be used to fulfill the purported gap between supply and demand. Additionally, it is unclear whether the gap can be filled by existing resources, new build, or both—it is unlikely, for example, that 5 GW of new resources can be brought online before next summer. In other words, it is not clear if the problem is a shortage of RA contracts on existing resources, a shortage of new build, or both.

Therefore, the Commission should clarify which of the following categories of resources below would be eligible for filling this gap. To the extent these resources have identifiers such as a CAISO ID or a project name in the CAISO Interconnection Queue[12], the Commission should provide those.

- Additional RA Contracting of existing in-state generation
- Additional RA imports contracting
- Repowering thermal generation
- Extending retirement dates
- New build
- New Storage
- Demand response

[12] http://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx

III. CONCLUSION

CalCCA appreciates Commission staff's efforts in performing its Preliminary Summer 2022 Stack Analysis and looks forward to further collaboration on this topic.

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(*Original signed by*)

Eric Little
Director of Regulatory Affairs
California Community Choice Association
(510) 906-0182 | eric@cal-cca.org