BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Reforms and Refinements, and Establish Forward Resource Adequacy Procurement Obligations.	R.21-10-002

CALIFORNIA COMMUNITY CHOICE ASSOCIATION'S COMMENTS ON THE LOCAL CAPACITY REQUIREMENT (LCR) FINAL WORKING GROUP REPORT AND ENERGY DIVISION'S LOSS OF LOAD EXPECTATION STUDY

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- The Commission should clarify how it uses or intends to use ELCC values for storage and hybrid resources;

- Other than updating the ELCC values for wind to account for the adoption of regional ELCC calculations in 2023 in D.21-06-029, the Commission should not adopt new ELCCs for wind and solar until a slice-of-day framework is adopted;

- Energy Division's import assumptions are too conservative and do not match the CAISO's PLEXOS assumptions, nor the data on actual imports. Energy Division staff should work with CAISO to determine reasonable import levels, and both the Commission and the CAISO should use the same assumptions;

- A new LOLE study is necessary once a slice-of-day framework is adopted to assess how the PRM is applied under a slice-of-day framework and to account for changes in inputs due to resource counting;

- The model should assume planned outages are optimized such that generators are available during constrained system conditions;

- Removing or altering deliverability restrictions in the NQC may be appropriate under a slice-of-day framework and should be considered in the Reform Track;

- Staff should perform LOLE studies on a regular cadence as inputs to the study such as load forecast, resource mix, and counting rules evolve. Updates to the PRM and ELCCs should only be made following an LOLE study if there are significant changes to the results and with enough time for parties to vet the results and for LSEs to plan and conduct orderly procurement to meet the new PRM;

- Storage and hybrid resources should not be valued using an ELCC. They should continue to be valued as they are today pending the outcome of the Reform Track;

- CalCCA generally supports the UCAP concept so long as UCAP is accurately reflected in the PRM;

- If UCAP is adopted, ambient derates should be included in the UCAP rather than the PRM; and

- The IEPR load forecast should be used to calculate the PRM, consistent with what is used to establish LSE RA requirements.

SUMMARY OF RECOMMENDATIONS continued

<u>Recommendations on the California Community Choice Association and Pacific Gas and Electric Company's (U 39 E) Local Capacity Requirement (LCR) Final Working Group Report:</u>

- Coordinated efforts between the IRP and TPP are required to ensure the state can meet its LCRs in a cost-effective manner with carbon-free resources; and

- CalCCA supports noticing the service list of key LCR study process milestones to allow for more meaningful input to the study results.

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CALIFORNIA COMMUNITY CHOICE ASSOCIATION'S COMMENTS ON THE LOCAL CAPACITY REQUIREMENT (LCR) FINAL WORKING GROUP REPORT AND ENERGY DIVISION'S LOSS OF LOAD EXPECTATION STUDY

The California Community Choice Association (CalCCA)[1] submits these Comments pursuant to the schedule set forth in the *Administrative Law Judge's Ruling Seeking Comments on the Future of Resource Adequacy Working Group Report and the Local Capacity Requirement Working Group Report* (Ruling)*,* issued on March 4, 2022.

I. INTRODUCTION

CalCCA appreciates the opportunity to comment on both Energy Division's Loss of Load Expectation and Effective Load Carrying Capability Study Results for 2024[2] (LOLE Study) and the California Community Choice Association and Pacific Gas and Electric Company's (U 39 E) Local Capacity Requirement (LCR) Final Working Group Report[3] (Final Report). Both

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1 California Community Choice Association represents the interests of 23 community choice electricity providers in California: Apple Valley Choice Energy, Central Coast Community Energy, Clean Energy Alliance, Clean Power Alliance, CleanPowerSF, Desert Community Energy, East Bay Community Energy, Lancaster Choice Energy, Marin Clean Energy, Orange County Power Authority, 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, Santa Barbara Clean Energy, Valley Clean Energy, Sonoma Clean Power, and Valley Clean Energy.

2 *Energy Division Study for Proceeding R.21-10-002, Loss of Load Expectation and Effective Load Carrying Capability Study Results for 2024* (Rulemaking (R.) 21-10-002), Feb. 18, 2022.

3 *California Community Choice Association and Pacific Gas and Electric Company's (U 39 E) Local Capacity Requirement (LCR) Final Working Group Report* (R.21-10-002), Feb 28, 2022.

documents demonstrate the considerable effort put forth by Energy Division staff and working group participants to ensure the Resource Adequacy (RA) program effectively evolves to meet future grid reliability needs.

Adequate planning and modeling are critical to ensure the RA program provides a stable procurement environment and reliable electric service. CalCCA applauds the California Public Utilities Commission (Commission) for its efforts in performing robust modeling and analysis in the LOLE Study to inform the planning reserve margin (PRM) and effective load carrying capability (ELCC) values. CalCCA generally supports the modeling assumptions, with the exception of the import assumptions and appreciates staff's questions regarding how LOLE analysis fits into the work underway in the RA Reform Track around slice-of-day frameworks. The comments in section II below respond to the questions posed by staff at the end of the LOLE Study.[4] In summary, CalCCA recommends:

- The Commission should clarify how it uses or intends to use ELCC values for storage and hybrid resources;
- Other than updating the ELCC values for wind to account for the adoption of regional ELCC calculations in 2023 in Decision (D.) 21-06-029, the Commission should not adopt new ELCCs for wind and solar until a slice-of-day framework is adopted;
- Energy Division's import assumptions are too conservative and do not match the California Independent System Operator Corporation's (CAISO's) PLEXOS assumptions, nor the data on actual imports. Energy Division staff should work with CAISO to determine reasonable import levels, and both the Commission and the CAISO should use the same assumptions;
- A new LOLE study is necessary once a slice-of-day framework is adopted to assess how the PRM is applied under a slice-of-day framework and to account for changes in inputs due to resource counting;
- The model should assume planned outages are optimized such that generators are available during constrained system conditions;

[4] LOLE Study, Appendix A, at 28.

- Removing or altering deliverability restrictions in the Net Qualifying Capacity (NQC) may be appropriate under a slice-of-day framework and should be considered in the Reform Track;

- Staff should perform LOLE studies on a regular cadence as inputs to the study such as load forecast, resource mix, and counting rules evolve. Updates to the PRM and ELCCs should only be made following an LOLE study if there are significant changes to the results and with enough time for parties to vet the results and for LSEs to plan and conduct orderly procurement to meet the new PRM;

- Storage and hybrid resources should not be valued using an ELCC. They should continue to be valued as they are today pending the outcome of the Reform Track;

- CalCCA generally supports the unforced capacity (UCAP) concept so long as UCAP is accurately reflected in the PRM;

- If UCAP is adopted, ambient derates should be included in the UCAP rather than the PRM; and

- The Integrated Energy Policy Report (IEPR) load forecast should be used to calculate the PRM, consistent with what is used to establish load-serving entity (LSE) RA requirements.

Also critical to the success of the RA program is the Local Capacity Requirement (LCR) study process. As the state undergoes the transition to 100 percent clean energy, particular attention will need to be paid to local areas to ensure the LCRs can be met with clean resources or reduced through transmission upgrades. Processes at the Commission and the CAISO must align to ensure a cost-effective and reliable transition away from reliance on fossil fuel resources in local capacity areas. In comments to the Final Report, CalCCA offers the following recommendations:

- Coordinated efforts between the IRP and TPP are required to ensure the state can meet its LCRs in a cost-effective manner with carbon-free resources; and

- CalCCA supports noticing the service list of key LCR study process milestones to allow for more meaningful input to the study results.

II. COMMENTS TO ENERGY DIVISION'S LOLE STUDY

The following provides CalCCA's responses to the eleven questions posed by staff at the end of the LOLE Study.

1. Which portfolio scenario (Base, A, B, C or D) best represents the likely portfolio in 2024? Which set of technology ELCC values should be assumed in selecting the short-term average ELCC values?

CalCCA generally supports using the base portfolio to represent the likely portfolio in 2024 and to select the short-term average ELCCs. The proposed base portfolio uses existing resources, resources identified in LSE IRP Plans, and additional storage capacity selected in Renewable Energy Solutions Model (RESOLVE) to calculate technology specific ELCCs. This portfolio represents the significant new resource build expected to take place between now and 2024. LSE IRP Plans, while potentially not an exact predictor of the resources that will be available in 2024, provide a reasonable representation of what can be expected to be developed in future years.

The Commission should provide clarity, however regarding, a) how it intends to use the analysis for changes to ELCCs for 2023 – other than updating the ELCC values for wind to account for the adoption of regional ELCC calculations in 2023 in D.21-06-029,[5] the Commission should not adopt the study results to make any changes to ELCCs in 2023 as any changes to ELCCs in 2023 will have to be reconsidered for 2024 after a slice-of-day framework is implemented, unnecessarily complicating LSE contracting and planning; and b) how it has or intends to use the results of the storage and hybrid ELCCs since they are not currently used to establish the NQC of these resources. In addition to clarifications around the ELCC methodology

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[5] *Decision Adopting Local Capacity Obligations for 2022-2024, Flexible Capacity Obligations for 2022, and Refinements to the Resource Adequacy Program* (R.19-11-009), June 24, 2021 (D.21-06-029), Ordering Paragraph 15.

for hybrid resources posed in question 8 below, clarification is needed around how ELCCs for storage and hybrids impact the ELCC value of other technologies and how they impact the PRM calculation. Do the ELCCs for storage and hybrids contribute to the diversity effects of solar and wind ELCCs? How do the ELCCs for storage and hybrids impact the PRM? Answers to these questions are needed to help parties better interpret the ELCC values and their use. The Commission should allow an additional opportunity for party comment following these clarifications.

2. What, if any changes should be made to the assumptions used to perform the LOLE study?

Changes should be made to the import assumptions used in the LOLE study. Energy Division's import assumptions, which limits imports to 4,000 megawatts (MW) during peak hours, are too conservative and should be revised to be more consistent with actual historical levels of imports. In revising the import assumptions, the Commission should clarify the reasoning behind the import assumptions used in the study, and work with CAISO to determine reasonable import levels so that both the Commission and the CAISO use the same assumptions. The Commission's modeling uses "a 4,000 megawatt (MW) peak import constraint in Hour Ending (HE) 17-22 [*i.e.*, 5 PM to 10 PM] in all 12 months of the year."[6] During the workshop, staff verbally clarified that this value was based on a review of firm RA import contracts.[7] However, this import constraint is implemented differently than that used by the CAISO in their PLEXOS model publicly posted in February 2022.[8] The table below outlines the differences between the two models.

6 LOLE Study at 9.

7 LOLE Study. Presentation in Resource Adequacy (R.21-10-002), Mar. 3, 2022 (Presentation).

8 CAISO Integrated Resource Planning 38MMT Core Portfolio PLEXOS models, located at http://www.caiso.com/market/Pages/ReportsBulletins/Default.aspx under "Special Reports: Integrated Resource Planning Preferred System Planning Model."

Table 1: Import Assumptions Comparison

Item	CAISO PLEXOS model	CPUC RA LOLE model	Do the models match?
Total simultaneous import limit (GW)	5.5 GW	4 GW	No
Hours of year in which constraint applies	HE 17-22	HE 17-22	Yes
Months of year in which constraint applies	June - September	All 12 months of year	No
Items falling under import constraints	Unspecified imports from all non-CAISO regions into CAISO Carbon-free imports into CAISO including Pacific NW Hydro, Hoover, and Palo Verde Directly imported RPS resources from other balancing authorities	Unclear	Unclear
Years Studied	2026, 2030	2024	N/A (models are for different purposes)

Further, the import constraint used in the LOLE study is likely too low to reflect actual imports into the CAISO. Table 2 below shows the average level of imports from other balancing authorities into CAISO, in MW at 5-minute intervals, from June – September HE 17-22 in calendar year 2021.[9] Average import flows into California are significantly higher than 4,000 MW in virtually all hours the Commission is proposing to limit imports.

Table 2: Average Import Levels by Hour and Month

Row Labels	6	7	8	9
17	2,257	3,078	4,434	5,107
18	2,994	3,668	5,038	6,336
19	4,464	4,815	6,287	7,817
20	6,300	6,069	7,326	8,510
21	7,271	6,619	7,959	8,667
22	7,571	7,156	8,211	8,609

9 Data from http://www.caiso.com/Documents/ProductionAndCurtailmentsData_2021.xlsx.

Even assuming minimum levels of import flows into CAISO, in MW at 5-minute intervals during the same period, there are hours in September where the minimum amount of imports is higher than 4,000 MW, implying that 4,000 MW is not a realistic limit.

Table 3: 2021 Minimum Import Levels by Hour and Month

Row Labels	6	7	8	9
17	-412	-1,488	-878	2,029
18	218	-1,454	-672	3,008
19	432	-198	147	4,461
20	1,283	913	1,061	5,438
21	2,727	1,719	3,086	5,617
22	3,233	2,033	3,871	6,101

Given these differences, the Commission should do the following. First, the Commission must clarify the reasons for the discrepancies between the CAISO's PLEXOS model import assumptions and the Commission's RA LOLE model import assumptions. These discrepancies are marked "No" or "Unclear" in the last column of Table 1 above, and include the total simultaneous import limit, the months of the year when it applies, and which out-of-CAISO generators fall under the import constraint. Second, the Commission should also clarify why it chose to use the import limit from HE 17 to HE 22 (5 PM to 10 PM). This period does not match the period studied in the California Energy Commission's (CEC's) stack analysis,[10] which analyzes 3 PM to 9 PM, nor does it match when the Commission requires imports to bid below $0 to receive RA credit, which is 4 PM to 9 PM.[11] Third, the Commission must reconsider the 4,000 MW simultaneous import limit, which is likely too low to reflect real-world conditions. Instead, the Commission should work with CAISO to determine a more reasonable import levels, and both the Commission and the CAISO should use the same assumption.

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10 *Staff Paper - Updated 2022 Summer Supply Stack Analysis* (21-ESR-01), at 11-13. Located at: https://efiling.energy.ca.gov/GetDocument.aspx?tn=241145&DocumentContentId=74989

11 *Decision Adopting Resource Adequacy Import Requirements* (R.17-09-020), June 25, 2020 (D.20-06-028), Ordering Paragraph 2.

To provide these necessary clarifications, Energy Division should publish additional information around how it has implemented its import assumptions. The raw PLEXOS table from the CAISO's modeling is included in Appendix A. This table shows how the simultaneous import constraint is implemented in PLEXOS, which resources fall under the constraint, and which months it applies in. The Commission could provide a similar table to allow parties to fully assess the import assumptions made.

The Commission should also provide transparency around how each assumption made in the LOLE study drives changes in the PRM from month to month. The application of assumptions can have a significant impact on resulting PRMs. Given the relatively large differences between the monthly PRMs, the Commission should provide transparency around which assumptions drive these differences and why.

3. Is a LOLE study appropriate to calculate RA obligations for: 1.) a peak RA capacity framework, 2.) a slice of day reliability construct?

Yes, an LOLE study is appropriate to calculate RA obligations for both a peak capacity framework and a slice of day reliability construct. In fact, a new LOLE study is critical once the final slice of day construct is adopted because the adopted construct will likely impact how PRM is determined and what the appropriate level of PRM is. For example, resource counting rules could impact the level of PRM required to achieve a targeted level of reliability. The 24-hour slice-of-day proposal would alter the qualifying capacity (QC) methodology for wind and solar; rather than rely on an ELCC methodology to account for these resources, their contributions to meet load would be determined on an hourly basis based on historical profiles. Should the 24-hour slice-of-day proposal be adopted, the Commission should re-run the LOLE study using wind and solar profiles which more closely represent the expected values used for the resources in the RA counting rules. Failure to do so could result in double counting of the renewable variance toward the PRM. These changes will impute a potentially different level of uncertainty within the RA construct and as such, the PRM must be revisited in the context of the slice-of-day framework.

4. How should planned outages be treated in calculating an RA PRM using an LOLE study?

When calculating an RA PRM, planned outages should be optimized to maximize resource availability during constrained hours and minimize their impact on the PRM. The LOLE Study indicates that Strategic Energy Risk Valuation Model (SERVM) models planned maintenance given an annual amount of required maintenance based on Generator Availability Data Set (GADS) outage data and allocates required planned maintenance across the months according to monthly system conditions.[12] Unlike forced outages, planned outages can be timed by the generator and must be approved by the CAISO such that maintenance occurs at the most opportune time for system conditions in order to optimize energy revenues for the generator and minimize expected disruption to the grid. Therefore, as indicated in the LOLE Study, planned outages generally occur when supply conditions are not tight.[13] It is reasonable to assume maintenance is taken during times of the year when energy prices are expected to be low, such that generators can be available to take advantage of high market prices when the system is constrained. Similarly, the CAISO has the ability to disallow a planned outage if anticipated grid conditions would make such an outage risk grid reliability or if an RA resource requesting a planned outage does not provide a substitute resource. The modeling should reflect these practices such that planned outages are optimized to reduce their impact on the PRM and that generators are not taking maintenance when the system is constrained.

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12 LOLE Study at 9.

13 *Id.* at 19.

5. **Would removing deliverability restrictions in the NQC calculation be an accurate translation of the way that resources provide reliability value to CAISO in most instances, outside of particularly constrained times? Would it be possible that certain resources would avoid making transmission upgrades because they have less of an incentive? Do parties have any other arguments pro or con about deliverability restrictions in the QC calculation?**

Modifications to deliverability restrictions in the NQC calculation should be considered in the Reform Track, in conjunction with the slice-of-day proposals. Removing or altering deliverability restrictions to the NQC could be appropriate under a slice of day construct, under which resources have NQCs during individual slices. The current deliverability study methodology ensures that RA capacity can provide energy to the system when dispatched during peak load hours without being restricted by the dispatch of other resources at the same time. This method is not appropriate for all slices, particularly slices during off-peak hours. Considerations of how to modify deliverability restrictions on NQC should be considered in the Reform Track, where slice-of-day proposals are being considered, to ensure resources are not over or under counted under a new slice-of-day framework.

6. **How often should staff perform LOLE studies for RA obligations and ELCC values? Are there problems with performing RA studies and ELCC studies together simultaneously as is done in this proposal?**

LOLE studies should be updated regularly to reflect changes to study inputs (*i.e.*, load forecast changes, resource retirements, or counting rule changes). Updates to the PRM and ELCCs should only be made following an LOLE study if there are significant changes to the results and with enough time for parties to vet the results and for LSEs to plan and conduct orderly procurement to meet the new PRM. This will provide needed certainty to LSEs in their planning and procurement. Over the next several years, these inputs are expected to change frequently due to procurement orders and new resource build, increased electrification, and planned structural RA reform. The Commission should therefore adopt a timeline for regularly conducting an LOLE study that allows sufficient time to perform the analysis and conduct a robust vetting process while accounting for these changes in a timely manner. This process should be aligned with the IRP process such that inputs derived from the IRP process are incorporated into the evaluation of RA requirements in a timely manner.

If an LOLE study can be easily performed and vetted on an annual basis timely and cost-effectively, the Commission should perform the LOLE study annually to inform the PRM and make changes if necessary. This annual update should be performed for at least the next few years to gain a better understanding of the level of change to the PRM that could be expected from a given level of inputs. If performing an annual LOLE analysis will be overly burdensome the Commission could either determine a more feasible amount of time to regularly review the PRM (*e.g.*, every two years or on the same cadence as IRP cycles). Alternatively, if inputs remain relatively stable year over year, the Commission could establish a threshold that would trigger a new LOLE study based on changes in inputs. These alternatives will ensure the PRM remains up to date in the event an annual PRM review process is not feasible.

7. Do parties have comments on the revised ELCC methodology which assigns diversity benefits via a series of marginal ELCC studies at different portfolio penetration points? Or do parties prefer the older method of calculating a capacity weighted average method of assigning diversity benefit?

CalCCA has no comments at this time.

8. Should storage and hybrid resources be valued using an ELCC methodology?

No, storage and hybrid resources should not have their NQC value determined using an ELCC methodology. Instead, they should continue to be valued as they are today pending the outcome of the RA Reform Track. The Commission is currently evaluating two primary slice-of-day proposals in the Reform Track, one of which would count storage based on its capacity and duration as shown by the LSE provided the LSE demonstrates sufficient excess capacity in other hours to charge the storage. This approach appears to value the contribution of storage resources more appropriately than an ELCC because it recognizes its contribution to reliability as a dispatchable resource and directly accounts for the need to charge storage, an increasingly important consideration as the grid becomes more reliant on storage. The Commission should not adopt ELCC values for storage and hybrid NQCs at this time given the ongoing work in the Reform Track to address resource counting. Instead, the Commission should continue to use the existing methodologies until a slice-of-day framework is adopted in the Reform Track.

In addition to the ongoing developments in the Reform Track, the ELCC methodology for hybrids requires additional clarification and review before the ELCC values can be adopted. First, staff must clarify the charging limitation assumptions for hybrid resources included in the model and validate that these assumptions in SERVM match reality to the extent practicable. The LOLE study indicates that charging is limited for some hybrid resources.[14] The study should elaborate on the reasons behind these constraints, as they may be the cause of the low ELCC for hybrids in the winter relative to the storage ELCC. If the justification for the constraint is the Federal Investment Tax Credit (ITC), then this should not be treated as a hard constraint. As long as storage charges 75% from renewables, the storage portion of hybrid can continue to qualify for the ITC, pro-rated at the portion charged from renewables. Hybrid charge and discharge patterns are dictated largely by the ITC, which penalizes grid charging. A production cost model generally dispatches resources based on price and may not capture the opportunity cost of foregone ITC credits or real-world grid charging behavior.

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[14] LOLE Study at 15.

To validate the results of SERVM's hybrid dispatch, staff should compare hourly charging and discharging hybrid behavior from CAISO settlement ("real") data versus modeled data, ensure that they approximately match, and adjust model inputs accordingly to correct any large discrepancies. Staff could release a table showing charge and discharge patterns by month and hour to allow stakeholders to ensure that hybrids are being charged and discharged in a way that reflects the real-world ITC incentives.

Second, staff's presentation defines the ELCC percent as Perfect Capacity MW divided by the installed capacity MW of a generator.[15] However, the term "installed capacity" is ambiguous for hybrid resources. It is unclear if this means that the denominator for the ELCC calculation of a hybrid is the sum of the solar installed capacity and storage installed capacity, or whether it is the point of interconnection (POI) capacity (which may be lower than that sum). The Commission should use the POI capacity as the denominator for hybrid ELCC. The POI represents the maximum rate at which the hybrid resource can deliver energy to the grid and is thus analogous to the definition of installed capacity for a single standalone resource. To be consistent with its definition of ELCC across resource types, the Commission should use the POI as the denominator in the ELCC calculation for hybrid resources.

In summary, the Commission should not adopt ELCC values for storage and hybrid RA counting. Proposals in the Reform Track around slice-of-day provide alternative methodologies for valuing storage that more appropriately reflect the capability of the resource and more clearly account for ensuring sufficient energy to charge the storage. Alternatively, if the result of the Reform Track is to expand the use of ELCCs, clarifications are needed around the methodology for valuing hybrids in order to assess the appropriateness of ELCC methodology used.

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[15] Presentation at 11.

9. Should the PRM be static across the year or vary monthly (or seasonally)? How should PRM and ELCC values be allocated across months? Via month specific studies or via some allocation method?

CalCCA has no comments at this time.

10. Should forced outage rates on thermal resources be included in setting their QC value? In other words, should the PRM be set using a UCAP or installed capacity (ICAP) framework? If an UCAP framework is used should the forced outage rates also include ambient derates?

Forced outage rates including ambient derates should be included in setting thermal resources' QC value using a UCAP framework so long as UCAP is accurately reflected in the PRM. CalCCA generally supports the UCAP concept given the benefits described below. CalCCA also supports including ambient derates in the UCAP value so that restrictions in output due to weather conditions are attributed to the units whose output is affected. The Effective Forced Outage Rate of Demand (EFORd) calculation assesses if units are available when they are "in demand." If a resource is not fully available due to ambient derates when it is needed, this should be accounted for in its UCAP value. Because ambient derates may vary by season, the Commission could consider calculating seasonal forced outage rates and UCAP values, as proposed by the CAISO in its UCAP proposal.[16] UCAP offers several benefits. First, attributing unit specific performance metrics into resources' capacity values rather than including a forced outage percentage in the PRM allows LSEs to assess the reliability of resources when making contracting decisions. Second, it allows the CAISO to eliminate its Resource Adequacy Availability Incentive Mechanism (RAAIM) tool, which has proven to be ineffective at incenting forced outage substitution. Finally, UCAP provides the right incentives for generators to conduct planned maintenance to reduce the chance of forced outages occurring when the system needs the resource. The Commission should ensure any adoption of UCAP is coordinated with the

[16] *Future of Resource Adequacy Working Group Report*, (R.21-10-002), Feb. 2022, at 52-58.

CAISO and should ensure the implementation of UCAP does not have unintended impacts to existing contracts.

11. Should the load forecast used to set RA requirements be based on the monthly load forecast produced by SERVM or the IEPR (as done today)? Should the PRM calculation (presented in Table 10) be based on the IEPR forecast as opposed to the SERVM monthly load forecast? Why or why not?

The Commission should base RA requirements and the PRM calculation on the IEPR load forecast for consistency and transparency. The IEPR forecast is used to derive LSE RA obligations and the PRM should be calculated based on the same forecast used to derive RA obligations. The development of the IEPR forecast is more transparent than the forecast produced by SERVM, as the CEC conducts an annual stakeholder process with opportunity for public review and comment. Using the more transparent forecast would allow parties to validate results of the PRM calculation more easily. For these reasons, the Commission should base both the RA requirements the PRM calculation on the IEPR forecast as opposed to the monthly load forecast produced by SERVM.

III. COMMENTS TO THE FINAL REPORT

In D.21-06-029, the Commission recognized the value of continuing an LCR Working Group given the substantial increase in the Greater Bay Area LCR requirement and recommended CalCCA and PG&E co-lead the LCR Working Group process. The Commission directed the LCR Working Group to evaluate and make recommendations on the following topics:

- Potential modifications to the current LCR timeline or processes to allow more meaningful vetting of the LCR study results;
- Inclusion of energy storage limits in the LCR report and its implications on future resource procurement; and

- How best to harmonize the Commission's and CAISO's local resource accounting rules.[17]

The Final Report was filed on February 28, 2022, outlining the discussion in the working group and recommendations by working group participants. The Final Report found that the working group process provided significant clarity on the LCR study process and assumptions. The Final Report also flagged that significant additional work is required to leverage the crossover between the LCR process and parallel planning processes, especially with the IRP process and TPP. Recommendations in the Final Report also addressed how the Commission and CAISO should coordinate to ensure stakeholders are engaged and sufficiently informed of LCR milestones. Finally, the Final Report urged parties to fully consider the relationship between the local RA construct and state policy efforts to ensure both objectives are balanced. [18] CalCCA supports the findings in the Final Report, including the importance of leveraging the crossover between the LCR, the IRP and TPP processes, coordinating communication around LCR milestones, and considering the relationship between the local RA construct and state policy efforts.

A. Coordinated Efforts Between the IRP and TPP are Required to Ensure the State can Meet its LCR in a Cost-Effective Manner with Carbon-Free Resources

The California electricity sector is currently undergoing a major transition towards 100 percent clean electricity. The ability for the state to meets local area reliability needs with clean resources will impact the state's progress towards meeting its ambitious clean electricity goals. The ability to retire fossil fuel resources in local areas will depend either on eliminating

[17] *Decision Adopting Local Capacity Obligations for 2022-2024, Flexible Capacity Obligations for 2022, and Refinements to the Resource Adequacy Program* (R.19-11-009), June 24, 2021 (D.21-06-029), at 13-14.
[18] Final Report, Attachment 1-3.

transmission constraints limiting the amount of resources that can serve the local area or bringing enough effective carbon-free resources online in the local area to replace the fossil-fuel resource. As demonstrated by the local requirement increase in the greater bay-area identified in the 2022 LCR, effectiveness of the local area resources available in the local areas can have significant impacts on the amount of RA resources that must be procured to meet the local requirement.[19] However, currently LSEs cannot easily identify which resource locations will be effective at meeting the local need when making decisions around new resource procurement.

Additional coordinated efforts between the IRP and TPP processes are needed to ensure resource and transmission build, cost-effectively address local area reliability needs while allowing fossil fuel resources in local areas to retire in order to meet California's policy goals. As recommended in CalCCA's Informal Comments, the following questions need to be considered to make decisions around whether resource or transmission build most cost-effectively addresses the LCR with clean electricity goals in mind:

- If the current resources have significantly low effectiveness factors, where should new resources locate to be more effective?
- What are the transmission alternatives and how much do they cost compared to the large increase in local RA requirement or a new resource at a more effective location?
- What information can be provided to the market about where new resources are needed based upon local area contingencies that are highly complex?[20]

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[19] *See, California Community Choice Association Informal Comments On The Local Capacity Requirement Working Group, February 2, 2022,* Feb. 24, 2022 (CalCCA Informal Comments) for additional discussion regarding the increased greater-bay area local requirements.

[20] *Id*.

B. CalCCA Supports Noticing the Service List of Key LCR Study Process Milestones to Allow for More Meaningful Input to the LCR Study Results

CalCCA supports the Final Report's recommendation that the Commission notice CAISO LCR stakeholder process activity on the Commission's service list.[21] Noticing the service list of key LCR dates and milestones would allow for reach a potential broader audience of stakeholders and allow for more robust participation in the CAISO's LCR stakeholder process.

IV. CONCLUSION

For all the foregoing reasons, CalCCA respectfully requests consideration of the comments specified herein and looks forward to an ongoing dialogue with the Commission and stakeholders.

Respectfully submitted,

Evelyn Kahl

Evelyn Kahl
General Counsel to the
California Community Choice Association

March 14, 2022

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21 Final Report, Attachment 1-3.

APPENDIX A
TO
CALIFORNIA COMMUNITY CHOICE ASSOCIATION'S COMMENTS ON THE LOCAL CAPACITY REQUIREMENT (LCR) FINAL WORKING GROUP REPORT AND ENERGY DIVISION'S LOSS OF LOAD EXPECTATION STUDY

CAISO PLEXOS IMPLEMENTATION OF SIMULTANEOUS IMPORT CONSTRAINT

Collection	Parent Object	Child Object	Property	Value	Units	Band	Timeslice	Action	Scenario	Memo	Category
Constraints	WECC	CAISO Import	Sense	<=	-	1		=			Import Limitations
Constraints	WECC	CAISO Import	RHS	11665	-	1	!ISOImport	=	CAISO IRP19		Import Limitations
Constraints	WECC	CAISO Import	RHS	5500	-	1	ISOImport	=	IRP21a_38MMT	reduce import from 5k to 4k+1457	Import Limitations
Generator.Constraints	Apex CC	CAISO Import	Reserve Provision Coefficient	1	MW	1		=			Import Limitations
Generator.Constraints	DesertStarCC-Total	CAISO Import	Reserve Provision Coefficient	1	MW	1		=			Import Limitations
Generator.Constraints	Mesquite CC1	CAISO Import	Reserve Provision Coefficient	1	MW	1		=			Import Limitations
Generator.Constraints	MesquiteCC2-Total	CAISO Import	Reserve Provision Coefficient	1	MW	1		=			Import Limitations
Generator.Constraints	Hoover - CAISO	CAISO Import	Reserve Provision Coefficient	1	MW	1		=			Import Limitations
Generator.Constraints	LineUpAS	CAISO Import	Reserve Provision Coefficient	1	MW	1		=			Import Limitations
Generator.Constraints	Wyoming_Wind	CAISO Import	Generation Coefficient	-0.7	MW	1		=			Import Limitations
Line.Constraints	APS_to_SCE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	APS_to_SDGE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	BPA_to_PG&E_VLY	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	CFE_to_SDGE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	IID_to_SCE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	IID_to_SDGE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	LDWP_to_SCE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	NEVP_to_SCE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	PACW_to_PG&E_VLY	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	PG&E_VLY_to_SMUD	CAISO Import	Flow Coefficient	-1	MW	1		=			Import Limitations
Line.Constraints	PG&E_VLY_to_SPP	CAISO Import	Flow Coefficient	-1	MW	1		=			Import Limitations
Line.Constraints	PG&E_VLY_to_TIDC	CAISO Import	Flow Coefficient	-1	MW	1		=			Import Limitations
Line.Constraints	SCE_to_SPP	CAISO Import	Flow Coefficient	-1	MW	1		=			Import Limitations
Line.Constraints	SCE_to_WALC	CAISO Import	Flow Coefficient	-1	MW	1		=			Import Limitations
Line.Constraints	DI_CANWHydro	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_Hoover (ISO)_SCE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_PaloVerd 1-3_SCE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_IID_SCE_RPS	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_LDWP_SCE_RPS	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_OOSRPS_AZ	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_OOSRPS_N BPA	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_OOSRPS_NM	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_OOSRPS_S CFE	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_OOSRPS_S NEVP	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Line.Constraints	DI_OOSRPS_S TEPC	CAISO Import	Flow Coefficient	1	MW	1		=			Import Limitations
Timeslices	WECC	ISOImport	Include	Yes	Yes/No	1	M6-9,H17-22	=			-