

**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.

Rulemaking 21-10-002

**COMMENTS OF THE CALIFORNIA WIND ENERGY ASSOCIATION
ON REFORM TRACK FRAMEWORK**

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*On behalf of the California Wind
Energy Association*

June 9, 2022

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I. INTRODUCTION AND SUMMARY

Pursuant to the May 20, 2022, Proposed Decision of Administrative Law Judges Chiv and O’Rourke Adopting Local Capacity Obligations for 2023 - 2025, Flexible Capacity Obligations for 2023, and Reform Track Framework (“Proposed Decision” or “PD”), the California Wind Energy Association (“CalWEA”) respectfully submits these opening comments on the Reform Track Framework only.

II. COMMENTS

A. The PD Commits Legal Error By Requiring the Use of Exceedance Values

In adopting PG&E’s proposed exceedance methodology as “a sufficient means” to determine wind and solar capacity values under the 24-hour framework,¹ the Proposed Decision commits legal error because state law requires the Commission to use effective load carrying capacity (“ELCC”) values in establishing the contribution of wind and solar energy resources toward meeting resource adequacy requirements.² As IEP explained and documented, the Legislature “plainly intended that the Commission must use ELCC as the resource counting methodology for the RA program.”³ The PD does not even address this issue, let alone attempt to explain how the decision is consistent with state law.

¹ PD at Conclusion of Law 13 and Finding of Fact 13.

² Public Utilities Code Sec. 399.26(d).

³ IEP Reply Comments on Future of RA Working Group Report at pp. 7-8 (April 1, 2022).

The 24-hour framework is fundamentally inconsistent with calculating ELCC values because, under that framework, ELCC calculations would need to be done on an hourly basis, which would be too resource-intensive and potentially unreliable due to small available sample sizes.⁴ Thus, the 24-hour framework is fundamentally at odds with state law requiring the use of ELCC values for wind and solar resources. The Commission must squarely address the need for legislation action under the 24-hour approach.

CalWEA proposed the Effective Net Load Reduction (“ENLR”) methodology for determining wind and solar capacity values under the 24-hour approach, as it would “consistently reflect the historical correlation between actual load and wind and solar production.”⁵ While ENLR is also not an ELCC methodology, it is a simple and data-driven approach, effectively captures the correlation between actual load and wind and solar production (also characteristic of the ELCC approach), and avoids the gross arbitrariness of the exceedance method, which is CalWEA’s primary objection to that method. If ENLR were adopted as part of the 24-hour approach, CalWEA would be more amenable to amending the statute that requires the use of ELCC values. However, even with improvements gained via the adoption of the ENLR approach for capacity counting, CalWEA still finds the 24-Hour framework to be far inferior to the two-slice approach.

B. The PD Does Not Support Its Statement That the 24-Hour Deterministic Approach Is “Necessary”

The Proposed Decision declares that, despite its departure from probabilistic planning, the “more deterministic” 24-hour framework “is necessary to achieve short-term reliability needs as it assesses the needs of the grid for every hour of the day.” Fair consideration of the two proposals – including a full and accurate understanding of the two-slice approach -- would not conclude that the 24-hour approach is either necessary or preferable.

Most basically, the PD’s evaluation of the two-slice approach fails to appreciate its grounding in monthly Loss of Load Expectation (“LOLE”) studies that fully account for energy availability, capacity availability, and the stochasticity of all variables across all hours as they

⁴ Future of RA Working Group Report at PDF-p. 49.

⁵ *Ibid.*

determine system monthly RA gross load requirements.⁶ Furthermore, the monthly assessment accounts for the chronological variation in load and various energy-limited resources, a characteristic that is sorely missing in the 24-hour framework where each hour of operation, presenting the typical hour for the whole month, will be dealt with independently of operations during the other 23 hours of the day. In addition, the two-slice approach includes a net peak resource check as an additional assessment performed by the system operator to ensure the sufficiency of available resources.⁷ Thus, many of the PD's characterizations of the two-slice proposal are simply incorrect and may reflect a misunderstanding of the approach.

The PD's argument that the two-slice framework "recommends continued reliance on single-value estimates for variable energy resources, which undervalue contributions during the current peak and overvalue contributions during the net peak," ignores the foundational LOLE study as well as the proposal's Net Peak Resource Assessment that would evaluate resources' capacity contributions during the critical net peak hour using historical output profiles, as opposed to ELCC values, as an added check on resource sufficiency.⁸ CalWEA proposed a specific method for evaluating those historical output profiles, called the Effective Net Load Reduction ("ENLR") methodology⁹ that calculates a simple average of the historical hourly output of wind and solar during those hours of the past three (or more) years when load was higher than a defined threshold level. The PD ignores this aspect of Gridwell's proposal, and CalWEA's proposed refinement of it, which would accurately assess variable energy resources during the net peak.

The PD states that the 24-hour approach "bas[es] reliability needs on a more granular level" and "a one-point framework [should the net peak and gross peak converge] is the same as the existing RA framework today."¹⁰ The existing RA framework, however, is not grounded in LOLE studies, as is the two-slice approach and thus it is not the same as today's RA framework. The two-slice approach captures hourly resource needs far more robustly than the current

⁶ The "two slice" moniker was an unfortunate semantic choice that may have been intended to fit with the Commission's initial adoption of PG&E's original "slice of day" proposal. The "two-slice" aspect of Gridwell's proposal is not descriptive of its essence.

⁷ Future of RA Working Group Report at PDF-p. 35.

⁸ See RA Framework Report at PDF-pp. 37 and 39.

⁹ See Future of RA Working Group Report at pp. 45-47 and CalWEA's Reply Comments on Working Group Report at p. 2 (April 1, 2022).

¹⁰ PD at pp. 72 and 73, respectively.

approach or the 24-hour approach and will therefore lead to a more accurate assessment of needed resources. That the net peak may someday converge with the gross peak is immaterial -- the net peak/gross peak resource check still provides a second check on the monthly ELCC values during the critical hour based on historical production in that hour.

In stating that the two-slice proposal, which removes the MCC bucket requirement, “fails to include an explicit requirement for ensuring sufficient energy is available for charging storage,”¹¹ the PD demonstrates a misunderstanding of the widely used ELCC approach. In accounting for energy availability, among other needs, the LOLE studies would fully account for energy charging needs, which would be allocated to (and required of) LSEs. CalWEA also noted in previous comments that, if CAISO remains concerned, it should use the monthly LOLE study results to inform the minimum level of dispatchable resources that is needed for individual months of operation to ensure that all necessary resources, including charging resources, are present in LSEs’ portfolios.¹² Moreover, IEP pointed out that no party demonstrated a foreseeable shortage of charging energy and that, if charging capacity ever emerges as a reliability constraint, the ELCC for storage will decline and the ELCC for solar and other resources that can provide charging energy will increase.¹³ IEP further pointed out that the 24-hourly slice approach does not address resources with monthly or seasonal use limits while, under the two-slice ELCC-based approach, the capacity value of resources with monthly use limits will decline in relation to the severity of the limits.¹⁴ This benefit of the two-slice approach, and shortfall of the 24-hour approach, is not addressed in the PD.

Had the PD properly characterized the two-slice approach, compared with the 24-hour approach, it could not have arrived at the conclusion that the 24-hour deterministic approach is “necessary” – or preferable.

C. The Benefits of an LOLE-based Approach Are Worth the Effort

The PD states that performing ELCC studies regularly for various resource classifications and zones would entail “significant effort and challenges.”¹⁵ However, particularly with the

¹¹ PD at p. 73.

¹² CalWEA Comments on Future of RA Working Group Report at p. 2 (March 24, 2022).

¹³ IEP Comments on Future of RA Working Group Report at pp. 3-4 (March 24, 2022).

¹⁴ *Id.* at p. 12.

¹⁵ PD at p. 74.

LOLE studies completed in March of this year, Energy Division staff has amply demonstrated that it can capably perform these studies. The effort would be worthwhile overall because the studies would simultaneously establish ELCC values for all types of resources and determine an overall ELCC target that ensures achievement of an objective grid reliability standard (thus avoiding the need to separately establish a planning reserve margin). In addition, more straightforward implementation (compared to the fundamentally new 24-hour approach) will increase the likelihood of successful RA market reform, and reforms could be implemented by 2024. Finally, as noted above, the ELCC approach inherently and correctly addresses all system risks, including intra-day and multi-day periods of constrained resources that can only be captured in a chronological study.

The PD also states that LOLE/ELCC-based capacity values will cause “uncertainty in RA values that may arise as the portfolio of resources evolves from one study to the next.”¹⁶ But values that change based on actual system value are appropriate and those values will change gradually and somewhat predictably.¹⁷ And transparent, changing values are far better than values that will never be known under the 24-hour approach, where each load-serving entity will impute capacity values based on a complex matching of buyers’ load profiles and suppliers’ resource portfolios effectively in a black box. This would be particularly problematic for sellers that unbundle their product attributes (e.g., corporate sales typically do not include the RA attribute).

D. If the 24-Hour Proposal Is Adopted, the ENLR Methodology Should Be Used to Determine Wind and Solar Capacity Values

As explained in section II.A, above, the PD commits legal error by adopting PG&E’s proposed exceedance methodology to determine wind and solar capacity values under the 24-hour framework, which is fundamentally inconsistent with the ELCC values that are required under state law. Nevertheless, CalWEA proposed a non-ELCC methodology – the ENLR methodology, described generally above – to determine wind and solar capacity values under the 24-hour approach because it would consistently reflect the historical correlation between actual load and wind and solar production, thereby avoiding the arbitrariness of the exceedance method.

¹⁶ *Ibid.*

¹⁷ For example, the Lawrence Berkeley National Laboratory initially identified future falling solar capacity values many years before those values were realized.

The PD summarizes CalWEA’s proposed ENLR approach but does not explain why it rejects the approach in favor of PG&E’s proposed exceedance methodology. Adopting the ENLR approach within the 24-hour framework would not remedy the legal error committed in adopting a non-ELCC approach, although the ENLR approach similarly values production when load is high (capacity is needed).¹⁸ However, adopting the ENLR approach would be more accurate than the exceedance approach and would allay some of CalWEA’s concerns with the 24-hour framework. The Commission should therefore adopt the ENLR approach if the 24-hour framework is adopted.

E. Discussion of Needed Deliverability Reforms Should Precede a CAISO Stakeholder Process

CalWEA appreciates the PD’s recognition that changes to the CAISO’s deliverability assessment process are needed to ensure consistency with the Commission’s RA reforms.¹⁹ CalWEA requests that the Commission clarify that the needed changes should be discussed in the identified workstream regardless of whether they have first been considered in a CAISO stakeholder process. The CAISO is currently considering one aspect of its deliverability methodology²⁰ and it appears unlikely that CAISO will address other aspects prior to the completion of Workstream 3 in October. Addressing these topics in Workstream 3 could help to identify needed changes and encourage CAISO to address them in time for the implementation of the Commission’s RA reforms.

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¹⁸ Future of RA Working Group Report at PDF-p. 49.

¹⁹ PD at pp. 91-92.

²⁰ See CAISO May 27, 2022, Notice of Stakeholder Process to consider deliverability study dispatch assumptions. Available at: <http://www.aiso.com/Documents/Generation-Deliverability-Study-Dispatch-Assumptions-Call-060622.html>.

III. CONCLUSION

Wherefore, for the foregoing reasons, the Commission should properly characterize Gridwell's two-slice proposal and adopt that proposal with the ENLR methodology for the net-peak assessment. Should the 24-hourly framework be adopted, the ENLR methodology should be adopted for valuing wind and solar capacity values. Finally, the potential need for CAISO's deliverability methodology reform should be discussed holistically as it relates to the Commission's structural reforms in Workstream 3 regardless of whether this has first occurred in a CAISO stakeholder process.

Respectfully submitted,

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***On behalf of the California Wind Energy
Association***

June 9, 2022

VERIFICATION

I, Nancy Rader, am the Executive Director of the California Wind Energy Association. I am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing copy of “Comments of the California Wind Energy Association on Reform Track Framework” are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 9, 2022, at Berkeley, California.

/s/ Nancy Rader
Nancy Rader
Executive Director
California Wind Energy Association