

**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

**REPLY COMMENTS OF THE CALIFORNIA WIND ENERGY ASSOCIATION
ON FUTURE OF RESOURCE ADEQUACY WORKING GROUP REPORT**

Dariush Shirmohammadi
Technical Director
California Wind Energy Association
1700 Shattuck Ave., #17
Berkeley, CA 94709
Telephone: (310) 858-1174
E-mail: Dariush@shirconsultants.com

Nancy Rader
Executive Director
California Wind Energy Association
1700 Shattuck Ave., #17
Berkeley CA 94709
Telephone: 510-845-5077 x1
E-mail: nrader@calwea.org

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

April 1, 2022

**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

**REPLY COMMENTS OF THE CALIFORNIA WIND ENERGY ASSOCIATION
ON FUTURE OF RESOURCE ADEQUACY WORKING GROUP REPORT**

I. INTRODUCTION

Pursuant to Administrative Law Judge (“ALJ”) Chiv’s March 4, 2022, Ruling Seeking Comments on The Future of Resource Adequacy Working Group Report and The Local Capacity Requirement Working Group Report (“Ruling”), and ALJ Chiv’s March 28, 2022, email ruling extending deadline, the California Wind Energy Association (“CalWEA”) respectfully submits these reply comments on The Future of Resource Adequacy Working Group Report (“Working Group Report”).

CalWEA responds in part to the March 24, 2022, opening comments of American Clean Power - California (“ACP-CA”), California Environmental Justice Alliance and Union of Concerned Scientists (“CEJA and UCS”), California Large Energy Consumers Association (“CLECA”), California Independent System Operator (“CAISO”), Calpine Corp. (“Calpine”), Independent Energy Producers Association (“IEP”), Joint CCAs (Central Coast Community Energy, the City and County of San Francisco, operator of CleanPowerSF, San Diego Community Power, Silicon Valley Clean Energy Authority, and Valley Clean Energy Alliance), the Natural Resources Defense Council (“NRDC”), Pacific Gas & Electric Company (“PG&E”), and Southern California Edison Company (“SCE”).

CalWEA’s opening comments responded only to the questions posed in the Ruling and did not repeat our views on the reform proposals, which were included in the Working Group Report. In these reply comments, we respond to some of the opinions voiced about the reform proposals in parties’ opening comments.

II. COMMENTS

A. The Two-Slice Approach Can Ensure Reliability Generally, and Sufficient Charging Capacity Specifically

Some parties have taken issue with the two-slice model's ability to ensure reliability generally, or specifically regarding storage charging capacity. We explain how, with three simple adjustments to the two-slice approach, the arguments of PG&E and CAISO can be fully addressed.

PG&E argues that the Two-Slice Proposal's check for the net-load peak "is not a real check of the net-load peak hour, as it uses the gross load values for all resources except solar, which it zeroes out." The Gridwell approach, however, is based on LOLE modeling that evaluates resource performance in every hour of the monthly RA capacity counting period. As CEJA and UCS recognize, regularly updated LOLE/ELCC studies "alone should be sufficient to ensure that California achieves the 0.1 LOLE reliability standard. LOLE studies examine reliability during all hours of the day under a wide range of conditions, and these studies inherently examine the net peak period in addition to energy sufficiency concerns."¹ In addition, Gridwell proposes that CAISO perform a second reliability check at the evening net peak hour (or the most RA capacity-constrained hour) to ensure that LSEs have procured sufficient resources for that most critical hour each day.

Three additional simple adjustments to the two-slice approach would further ensure reliability generally and storage charging capacity specifically. First, CalWEA has proposed an approach to Gridwell's second check where CAISO would calculate the effective capacity of wind and solar resources during the evening net peak hour, rather than their ELCC values, based on the correlation between the historical output of these resources and actual historical system load. Our Effective Net Load Reduction ("ENLR") methodology, described in the Working Group Report,² would calculate 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. This would serve as a "real" check at evening net peak hour.

Second, we recommend that the Commission establish the PRM in such a way that would virtually ensure that the CAISO's net load peak test would successfully pass, such that the

¹ CEJA and UCS at p. 12.

² Working Group Report at pp. 45-47.

CAISO would rarely, if ever, need to cure a deficiency through its capacity market. IEP suggested, in a footnote, that “the RA program could peg the PRM (which would be higher due to a smaller denominator) and allocation of need to the net peak”, rather than the gross peak.³ In other words, the systemwide PRM would be determined based on system load at the time of the evening net peak hour, and the contribution requirement for each LSE would be measured based on its load level at the evening net peak hour plus the PRM measured by the LOLE for the evening net peak hour. A significant benefit of this approach would be that it would reward LSEs that reduce their load, and procure resources that deliver, during the net system peak load when the need for RA resources is the highest.

Third, CAISO and PG&E expressed concerns that the Gridwell approach of validating the resource adequacy fleet based on (ELCC-based) capacity values alone may not ensure adequate energy to meet demand and battery charging needs in the resource adequacy compliance period.⁴ In CalWEA’s opening comments, we noted that this concern could be addressed by using the Commission’s monthly LOLE study results to inform the minimum level of dispatchable resources needed to ensure that all necessary resources, including charging resources, are present in LSEs’ portfolios.⁵ This requirement would be similar to the current MCC buckets except that the size of the dispatchable capacity bucket will be determined optimally via the LOLE study as opposed to arbitrarily as is done today.

B. Parties Have Amply Explained Why The 24-Hour-Slice Approach Is Fraught with Risks

In its comments on the Working Group Report, CalWEA explained why it does not advocate adoption of the proposed 24-hour approach to reform: the proposal is not fully developed, it would be disruptive to the market, and therefore risks failing to achieve necessary RA reforms, and the value of RA resources would likely become far less transparent.⁶ In their opening comments, several parties elaborated on these concerns and articulated systemic

³ IEP at footnote 21, citing Schlag et al., Capacity and Reliability Planning in the Era of Decarbonization: Practical Application of Effective Load Carrying Capability in Resource Adequacy, Energy and Environmental Economics, Inc., 2020. (Available at: <https://www.ethree.com/wp-content/uploads/2020/08/E3-Practical-Application-of-ELCC.pdf>.)

⁴ CAISO at pp. 4-5; PG&E at p. 6.

⁵ CalWEA at p. 2.

⁶ Working Group Report at pp. 173-174.

concerns with the 24-hour slice approach. CalWEA shares these concerns, particularly the following two.

Mismatch between LOLE, PRM and resource values. IEP highlights the fact that the 24-hour approach “has not yet explained how the total capacity requirement identified in an LOLE analysis should be translated to a PRM in an RA regime that employs fundamentally different resource counting conventions.”⁷ Similarly, CEJA and UCS state that “calibration of RA obligations to ensure reliability may be more challenging with SCE’s 24-slice proposal.”⁸ SCE proposes that the issue be resolved in a workshop subsequent to adopting the framework,⁹ but this requires a leap of faith that the issue will be satisfactorily resolved. Indeed, NRDC indicates that its support of the 24-hour slice model is contingent upon adequately answering many remaining implementation questions, including how LOLE study results, which are based on many load and production sensitivities, would be translated to the “unidimensional” hourly framework.¹⁰ Similarly, ACP-CA cautions that the Commission “must ensure that the [24-hour] design is well understood and implementable before establishing an effective date”¹¹ and CEJA and UCS state that “without resolving these crucial aspects of the proposal, it is not clear if SCE’s 24-slice proposal will adequately ensure reliability, and it may also hamper the transition to clean electricity.”¹²

Illiquid markets and market power. IEP reasonably anticipates that the RA market will fragment into multiple product categories as each resource type becomes a different RA product (if it can still be called an RA product), with a different compliance value across all 24 hours which could result in shallow, illiquid markets and complicate planned outage substitution requirements.¹³ The Joint CCAs express concern that this could create market power for certain

⁷ IEP at p. 10.

⁸ CEJA and UCS at p. 2.

⁹ SCE at p. 7.

¹⁰ NRDC at p. 2. Calpine notes that at least 11 “open issues” were identified in SCE’s proposal. Calpine at p. 6, citing Working Group Report at p. 22.

¹¹ ACP-CA at p. 4.

¹² CEJA and UCS at p. 14.

¹³ IEP at pp. 4-5.

resources, especially owners of natural gas resources.¹⁴ Such market power would add to CEJA and UCS's expressed concern about SCE's proposal potentially fostering gas contracting.¹⁵

Lack of Optimum Energy Sufficiency. CEJA and UCS note that LOLE studies inherently examine the net peak period in addition to energy sufficiency concerns.¹⁶ This is so because an LOLE/ELCC study is based on optimal dispatch of all resources, including charging and discharging of storage resources, and hence, not only ensures energy sufficiency but also accounts for it in an optimal fashion. While the 24-hourly slice approach should naturally ensure capacity sufficiency for every hour of the day, the only way for it to ensure energy sufficiency for that day is to assume certain charging/discharging patterns for storage resources during the 24-hour period, which will be arbitrary and non-optimal.

C. If the 24-Hour Slice Approach Is Adopted, the Commission Should Adopt CalWEA's Recommended Effective Net-Load Reduction ("ENLR") Counting Methodology for Wind and Solar Resources

CalWEA agrees with CEJA and UCS that the comprehensive nature of probabilistic ELCC studies make them most analytically rigorous methodology available to calculate the reliability contribution of a resource (particularly variable and use-limited resources), that ELCC calculations are compatible with Gridwell's two-slice proposal, and that ELCC values will remain robust as the grid evolves.¹⁷ CalWEA also emphasizes that the "Effective Net Load Reduction" ("ENLR") method should be used for evaluating wind and solar reliability values for the two slices in Gridwell approach (particularly for the net peak).

However, if the Commission moves forward with SCE's 24-hourly approach, CalWEA demonstrated that its proposed ENLR methodology is superior to the "exceedance" method because the ENLR method would consistently reflect the historical correlation between actual load and wind and solar production. While CalWEA's methodology does require the selection of a specific load threshold, CalWEA demonstrated that the ENLR values are stable between 50% and 80% of load.¹⁸

¹⁴ Joint CCAs at p. 5.

¹⁵ CEJA and UCS at pp. 8-9.

¹⁶ CEJA and UCS at p.12

¹⁷ CEJA and UCS at pp. 7-8.

¹⁸ Working Group Report at pp. 45-47.

Therefore, if the Commission moves forward with SCE’s approach, it should specify the use of the ENLR methodology to determine the Qualifying Capacity (QC) values of wind and solar resources. At a minimum, as suggested by CLECA, the Commission should charge a working group with further investigating the ENLR and exceedance methodologies for determining wind and solar QC values.¹⁹

D. PG&E’s Criticisms of the Two-Slice Approach Are Unwarranted

PG&E argues that the two-slice proposal will fail to advance environmental goals because it “would perpetuate uncertainty in variable energy resources like wind and solar, whose value can change significantly following revisions to the ELCC values ... which could lead to less investment given the uncertain value such resources will have.”²⁰ First, given that ELCC is accepted by the entire industry as the best measure to evaluate the capacity of variable energy resources in meeting system RA capacity and, as a result, its reliability needs, the fact that ELCC values may change is not a reason to select alternate methodologies that do not reflect what those values are with a changing resource mix and demand patterns. Second, studies of future values can be conducted to provide some visibility on how values are likely to change under various possible futures. Moreover, as explained by CEJA and UCS, the 24-hourly framework is more likely to favor natural gas resources than the two-slice approach.²¹

PG&E also charges that the two-slice proposal could foster LSE “leaning” on CAISO resources.²² But, if the CPUC penalizes LSEs for not meeting their monthly ELCC targets, and bases those targets on each LSE’s load at the evening net peak hour (plus the associated PRM), as discussed above, it is unlikely that CAISO will find any need for capacity to meet its net peak load capacity “check” – i.e., no leaning will occur.

¹⁹ CLECA at pp. 10-11.

²⁰ PG&E at p. 6.

²¹ Note 14 *supra*.

²² PG&E at p. 7.

Respectfully submitted,

/s/ Nancy Rader

Nancy Rader

Executive Director

California Wind Energy Association

1700 Shattuck Ave., #17

Berkeley CA 94709

Telephone: (510) 845-5077 x1

Email: nrader@calwea.org

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

April 1, 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 “Reply Comments of The California Wind Energy Association on Future of Resource Adequacy Working Group Report” 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 April 1, 2022, at Berkeley, California.

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