

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

Order Instituting Rulemaking to Oversee
the Resource Adequacy Program, Consider
Program Refinements, and Establish
Annual Local and Flexible Procurement
Obligations for the 2016 and 2017
Compliance Years.

Rulemaking 14-10-010
(Filed October 16, 2014)

**COMMENTS OF THE
CALIFORNIA WIND ENERGY ASSOCIATION
ON PRELIMINARY PHASE 3 PROPOSALS**

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*On behalf of the California Wind
Energy Association*

January 13, 2017

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I. INTRODUCTION

Pursuant to the Phase 3 Scoping Memo and Ruling issued by Assigned Commissioner Michel Peter Florio and Administrative Law Judge (“ALJ”) Dudney (“Ruling”) on September 13, 2016, and the subsequent Email Ruling of ALJ Peter Allen issuing a due-date correction, the California Wind Energy Association (“CalWEA”) submits these comments on the preliminary Phase 3 Resource Adequacy program proposals, focusing on proposals concerning the Effective Load Carrying Capability (“ELCC”) methodology to determine the net qualifying capacities (“NQC”) of wind and solar resources for Resource Adequacy (RA) compliance in 2018 and beyond.

In summary, with one important caveat, CalWEA supports the ELCC proposal submitted on December 16, 2016, by Calpine Corporation, a joint product of Calpine and Energy +Environmental Economics (“E3”) (the “Calpine/E3 Proposal”). The ELCC methodological approach for calculating wind and solar resources’ monthly ELCC (NQC) values in the Calpine/E3 Proposal is nearly identical to the approach set forth by Energy Division at the November 8, 2016, workshop on ELCC issues, but the Calpine/E3 Proposal also includes elements that will assure the appropriate valuation of incremental procurements and accounts for the interactive diversity benefit of having both wind and solar in the portfolio. Importantly, however, the Loss of Load Expectation (“LOLE”) should be allocated across the months of the

year based on the “Minimized LOLE” approach presented by Energy Division at the November 8, 2016, workshop on ELCC issues and not spread equally across the year as the Calpine/E3 Proposal would do.

Additionally, we briefly comment on the December 16, 2016, Preliminary Phase 3 Proposals of the CPUC’s Energy Division, Southern California Edison Company (“SCE”), Pacific Gas & Electric Company (“PG&E”), and the California Energy Storage Alliance (“CESA”).

II. COMMENTS

A. **The Calpine/E3 Proposal Should Be Accepted After Modifying Its Monthly Allocation of LOLE**

CalWEA appreciates the Calpine/E3 Proposal for clearly articulating the impetus behind this ELCC discussion, the benefits of ELCC especially compared to the current exceedance approach, and for the detailed explication and analysis of its proposed approach. CalWEA generally agrees with Calpine/E3 that their proposal strikes an appropriate balance between the criteria that Calpine/E3 articulated (p.1-2), and we particularly support the following elements of the proposal:

- **Accounting for the impact of behind-the-meter (“BTM”) resources on ELCC estimates.** This is critical to the accurate valuation of solar resources because BTM-solar substantially increases the saturation of solar and hence lowers the capacity value of all other solar resources;
- **Vintaging resource values.** Treating all resources that are existing and planned as of 2018 as a single vintage, and treating resources that come on line in each subsequent year as distinct vintages, is essential to ensure that incremental resources will be ascribed appropriate NQC values.¹ In addition to other important reasons supporting this approach that are articulated in the Calpine/E3 proposal, vintaging is important to ensure reliability, since constantly changing values could lead to an unmanageable process that would make it difficult, if not impossible, to properly account for the impact of a proposed resource on system reliability. And using average values would mask the declining value of similar resources, crediting too much reliability value and resulting in falling short of meeting the system reliability standard in reality (though not on paper), and thus threaten system reliability;

¹ CalWEA made a similar vintaging proposal in October 23, 2015, comments in the RPS proceeding.

- **Adjusting standalone ELCC values for solar and wind, in proportion to their standalone value, to reflect a diversity benefit.** This element accounts for the fact that the two resources together provide more capacity value than the sum of their two individual values.

While the Calpine/E3 proposal seeks to derive ELCC values that are specific to each month by applying the ELCC method on a monthly basis using monthly LOLE values -- an improvement upon proposals that would only manipulate annual ELCC values, its approach of spreading the annual 1-in-10-year LOLE standard equally across the months (resulting in a 0.2 hour/month LOLE standard) is inferior to the “Minimized LOLE” approach presented by Energy Division at the November 8, 2016, workshop on ELCC issues.

Calpine/E3 justifies this element of its proposal with the argument that it is simple and “reflects the fact that the current RA program utilizes flat planning reserve margins across all twelve months and hence presumably targets comparable levels of reliability in different months (although the same planning reserve margin in different months may yield different levels of reliability.)” The point that we have underscored in the parenthetical is important: spreading LOLE equally across the months masks the fact that the reserve margin, expressed as a percentage of monthly peak demand, is starkly different from one month to the next. We can ignore that fact and treat risk in all months as equally important, or we can adopt the Minimized LOLE approach. As discussed in CalWEA’s December 1, 2016, comments, the Minimized LOLE approach allocates the annual LOLE mainly to summer months, which not only more accurately reflects a historical trend, but would also allow Load-Serving Entities (“LSEs”) to meet annual LOLE standards at a lower cost. The results of ED’s analysis show that the Minimized LOLE approach results in the lowest level of monthly PRM values that, in turn, will lower costs for ratepayers who pay for PRM procurement/contracting costs.

As CalWEA noted in its December 1, 2016 comments, the Commission should consider changing RA capacity procurement/contracting practices to reflect this fact. Meanwhile, however, it can adopt an approach to ELCC that does so. Modifying the Calpine/E3 Proposal in this way is straightforward and would not unduly complicate it.

B. Comments on Other Proposals

1. Comments on Proposals to Delay Full Implementation of ELCC

In its December 16, 2016, filing, Energy Division proposes (at p. 16) adopting the annual ELCC values for wind and solar capped at monthly exceedance values “if the monthly ELCC values proposed by Energy Division staff this year are not adopted.” In view of the solid progress that has been made in this proceeding, there is no reason for the Commission not to adopt the Calpine/E3 ELCC proposal, modified to use Energy Division staff’s Minimized LOLE allocation approach as discussed above. As recounted by the Calpine/E3 proposal (at subsection 1.1), the Commission is long overdue in its implementation of the 2011 statute requiring that ELCC values be used in the RA program. Moreover, the exceedance values are badly out of step with current grid conditions, as has been shown by Calpine/E3 (at subsection 1.3). It is past time for the Commission to adopt a complete ELCC methodology; it must not adopt an inaccurate stop-gap approach.

In PG&E’s December 16, 2016, filing, PG&E proposes a two-year transition to ELCC-based NQC values for wind and solar “due to the strong likelihood that when the ELCC values are binding, LSEs will need to procure additional resources due to the decrease in RA capacity from wind and solar resources.” The stated reason should underscore the importance of immediate implementation of ELCC, not further delay. If the utilities have been under-procuring RA resources due to the current faulty exceedance methodology, that is a problem that should be remedied immediately to ensure grid reliability.

2. Comments on SCE’s Proposal to Validate ELCC Values

In its December 16, 2016, filing, SCE states (at p. 1-2) that its Net Load Peak based ELCC (“NLP-ELCC”) analysis should be used to validate the results of the ELCC approach adopted in this proceeding. SCE argues that its analysis of previous ELCC values “identified a deficiency between RA resources and load needs in months with the highest loads and RA resource needs.” But, while NLP-ELCC looks at the effect of variable energy resources in reducing and shifting net load, which initially is intuitively attractive, it still is a simplified approach that does not appear to capture the impact of acceptable outage levels (LOLE), which plays a major role in determining the capacity value of these resources. In effect, SCE has it

backwards: ELCC is the yardstick against which the results of other ad-hoc approaches should be measured.² The important issue is establishing the monthly LOLE as appropriately as possible for use in the ELCC analysis, as discussed above. Once that is done, the monthly ELCC results will accurately reflect the capacity contribution of wind and solar resources towards system RA capacity needs.

3. Comments on Other PG&E Proposals

PG&E recommends (at p. 12) that the Commission limit the variation in ELCC values to account for variation in location and solar-technology types. We agree with PG&E that, if the Commission does not have the capability to accomplish fine-tuning for the 2018 program year, calculating basic wind and solar ELCC values should be implemented now and fine-tuning should be accomplished in later years.

PG&E recommends (at p. 11-12), given the pace at which the generation portfolio is changing, that the Commission and the CAISO establish NQC values annually and that advisory NQC values be provided for the following compliance year to help inform LSEs in their contractual decisions. CalWEA is in agreement with this comment as well, however, it would be critical that the CAISO calculate and provide incremental ELCC values for new resources along with average ELCC values for operating and confirmed resources, as incremental values are necessary to properly inform procurement (as discussed on p. 2, above).

4. Comments on CESA Proposal to Value Storage Combinations

CESA argues (at p. 7) that the Commission should model and develop ELCC values for solar plus storage and wind plus storage in multiple configurations. CalWEA takes no position on this at present, but notes that maximum benefits from storage are gained when its operation is controlled by the system operator (CAISO) in response to system needs rather than to maximize some attribute of the accompanying generation.

² As Calpine/E3 stated (at p.3): “ELCC reflects a resource’s contribution to system reliability. Because ELCC is based on a rigorous, probabilistic analysis of reliability that encompasses the complete electric system, it is more accurate than time window approaches or other heuristics such as the exceedance methodology.”

Respectfully submitted,

/s/ Nancy Rader

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

January 13, 2017

VERIFICATION

I, Nancy Rader, am the Executive Director of the California Wind Energy Association and am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing *Comments of the California Wind Energy Association on Preliminary Phase 3 Proposals* 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 January 13, 2017, at Berkeley, California.

/s/ Nancy Rader _____

Nancy Rader
California Wind Energy Association