

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

3 Order Instituting Rulemaking to Oversee the
4 Resource Adequacy Program, Consider
5 Program Refinements, and Establish Annual
6 Local and Flexible Procurement Obligations for
7 the 2019 and 2020 Compliance Years

8 Rulemaking 17-09-020
9 (Filed September 28, 2017)

10 **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**
11 **TRACK 2 TESTIMONY**

12 **CHAPTER 5: EFFECTIVE LOAD CARRYING CAPACITY**

13 SPONSOR: Karl Meeusen, Senior Advisor, Infrastructure and Regulatory Policy¹

14 **Proposal No. 4: The Commission Should Fully Adopt a Comprehensive Effective Load**
15 **Carrying Capability Methodology that Accurately Reflects the Reliability Contribution of**
16 **Wind and Solar Resources**

17 In its Decision (D.) 17-06-027 (Decision),² the Commission adopted qualifying capacity
18 values based on an Effective Load Carrying Capability (ELCC) methodology designed to
19 accurately value the reliability contributions of grid connected wind and solar resources. In its
20 Decision, the Commission adopted an Energy Division proposal³ for wind and solar qualifying
21 capacity values aimed at smoothing the transition to ELCC for these resource types. However,
22 in its Decision, the Commission did not specify how long the proposed ELCC calculation would
23 be effective, instead stating that “[g]oing forward, the process used to calculate monthly ELCC
24 values will be subject to changes, improvements and refinements as needed.”⁴ The California
25 Independent System Operator Corporation (CAISO) believes that improvements and refinements
26 are necessary and should be addressed in Tracks 2 and 3 of this proceeding.

27 ¹ See Karl Meeusen’s statement of qualifications, attached hereto as Appendix A.

28 ² See the Commission’s D. 17-06-027, adopting qualifying capacity values based on an Effective Load Carrying
Capability at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M192/K027/192027253.PDF>.

³ Referred to as “Energy Division’s second proposal.”

⁴ See the Decision, at p. 21.

1 Specifically, the CAISO is concerned that continued reliance on the existing ELCC
2 methodology results in an over-estimation of the reliability contribution from wind and solar
3 resources, especially as incremental solar capacity is added to the system. In its Decision, the
4 Commission recognized that the adopted ELCC values for wind and solar resources exceeded the
5 actual reliability contribution of such resources, but it nonetheless adopted those values to
6 provide for a transition period. Specifically, the Commission stated:

7 We agree with PG&E and other parties that moving to an ELCC approach
8 such as Calpine's proposal or Energy Division's first proposal could result
9 in an overly abrupt and significant change in RA values, particularly of
10 solar resources, and would be unnecessarily disruptive. Both Energy
11 Division's second proposal and PG&E's approach address this issue, but
12 we believe that Energy Division's second proposal, which seeks to remove
13 the influence of behind-the-meter solar, has a stronger analytical basis, and
14 is less of a stopgap measure than PG&E's proposal.⁵

15 This over-counting of wind and solar resource's contribution to resource adequacy results
16 in the under-procurement of other resource adequacy capacity that is able to serve load across a
17 larger set of hours, including during and shortly after the net load peak. If the qualifying
18 capacity value of solar resources are overstated, it increases the likelihood that the CAISO will
19 need to make capacity procurement mechanism designations for additional resources to serve the
20 net load peaks. As a result, the CAISO proposes in Track 2 of this proceeding that the
21 Commission adopt a clear framework to transition to an ELCC methodology that both fully
22 accounts for the growth of behind-the-meter solar and does not inappropriately inflate the
23 qualifying capacity values of wind and solar resources. The Commission should aim to complete
24 implementation of that framework by the conclusion of Track 3. Specifically, in Track 2, the
25 Commission should determine (1) whether behind-the-meter solar should be treated as a supply
26 resource or load modifier and (2) whether the ELCC value of wind and solar resources should be
27 calculated using average or marginal impacts. Once the Commission makes these
28 determinations in Track 2, the ELCC values for wind and solar should be re-calculated in Track
3 and applied in full without any transitional adjustments for the 2020 resource adequacy
compliance year.

⁵ See the Decision at p. 21.

1 The CAISO notes that its proposal to use a 1-in-5 demand forecast to set system resource
2 adequacy requirements in April, May, and June relies critically on moving forward with
3 refinements in the ELCC methodology to ensure adequate amounts of resource adequacy
4 capacity can serve post-solar production demands. The CAISO clearly documented this issue in
5 its 2018 Summer Loads and Resources Assessment as the most significant concern impacting
6 system reliability for the summer months.⁶ Absent refinements to the current ELCC
7 methodology, the CAISO would propose applying the 1-in-5 demand forecast to set resource
8 adequacy requirements more broadly, from April through October.

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⁶ See the CAISO's 2018 Summer Load and Resources Assessment, available on the CAISO's website at <http://www.caiso.com/Documents/2018SummerLoadsandResourcesAssessment.pdf>

Appendix A

Statement of Qualifications

Karl Meeusen, Senior Advisor, Infrastructure and Regulatory Policy

Statement of Qualifications

Dr. Karl Meeusen – Senior Advisor, Infrastructure & Regulatory Policy at the California ISO

Prior to joining the California ISO, Dr. Meeusen served as Energy Advisor to President Michael Peevey of the California Public Utilities Commission (CPUC) on demand response and Federal Energy Regulatory Commission (FERC) related issues. Dr. Meeusen also worked as a Public Utility Regulatory Analyst in the Energy Division of the CPUC as a lead analyst on demand response and FERC related issues. Prior to joining the CPUC, Dr. Meeusen held research positions at the National Regulatory Research Institute and the U.S. Department of Justice, Antitrust Division and worked as an independent consultant. Dr. Meeusen joined the California ISO in 2011. Dr. Meeusen has represented the California ISO in several CPUC proceedings, including resource adequacy and joint reliability framework.

Dr. Meeusen's current responsibilities at the California ISO (CAISO) include:

- Developing and evaluating new wholesale electricity market designs related to ongoing efforts to integrate renewable resources into the CAISO electricity market and electric grid.
- Assessing changing resource adequacy needs as a result of the increased penetration of renewable resources to ensure that sufficient flexible capacity resources are available to effectively integrate resources.
- Leading the CAISO studies on shorter-term flexibility requirements in the multi-year proceedings.

Dr. Meeusen holds a Ph.D. in Agricultural, Environmental, and Development Economics from The Ohio State University and a Bachelor's of Science in Philosophy and Economics from the State University of New York, College at Brockport.