

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 3: RESOURCE ADEQUACY COMPLIANCE TIMELINE**
13 **AND CENTRAL BUYER**

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

15 **Proposal No. 2: Revise the Resource Adequacy Compliance Timeline to Better**
16 **Accommodate Resource Adequacy Processes and Decision Making**

17 **I. Introduction**

18 The California Energy Commission (CEC), California Independent System Operator
19 Corporation (CAISO), and Commission's processes to establish annual resource adequacy
20 requirements must be conducted in sequence. Delays at one step in the process often have a
21 cascading effect that compress the time left to conduct any remaining steps and reduce the time
22 that load serving entities (LSEs) and resource owners have to finalize procurement for the
23 subsequent resource adequacy compliance year.

24 In addition, the current resource adequacy cycle (1) provides insufficient time and
25 information to resource owners to make retirement and major maintenance decisions and (2) can
26 result in CAISO annual backstop procurement that is not completed before some monthly
27 resource adequacy showings are due. Currently, the resource adequacy compliance year runs
28 from January through December. Resource owners have insufficient lead time to make informed
retirement or major maintenance decisions because final procurement can occur almost
simultaneously with the beginning of the resource adequacy compliance year. Additionally, the
CAISO does not finalize annual resource adequacy validations and backstop procurement until

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

1 after LSEs submit their January and February monthly resource adequacy showings for the
2 subsequent resource adequacy compliance year.² As a result, LSEs only receive resource
3 adequacy credit for annual backstop procurement conducted by the CAISO for 10 out of 12
4 months of the year.

5 To remedy these concerns, the CAISO proposes that the Commission revise the current
6 resource adequacy timeline, including the start and end of the resource adequacy compliance
7 year, to allow additional time to conduct and vet necessary studies, incorporate central buyer
8 activities, allow time for informed retirement and major maintenance decisions, and ensure that a
9 full year of resource adequacy credit is allocated to all LSEs for any CAISO backstop
10 procurement. Importantly, the CAISO's revised resource adequacy timeline provides LSEs and
11 resource owners with information regarding the CAISO's needs across the resource adequacy
12 procurement horizon for certain essential reliability resources (ERRs), thereby providing LSEs,
13 and/or a central buyer, the opportunity to procure these resources and prevent CAISO backstop
14 procurement. Additionally, this early identification of ERRs provides resource owners with
15 advance notice of the resources that are essential for reliability.

16 The CAISO recognizes the value and role a central buyer or multiple central buyers could
17 play in supplementing California's bilateral capacity market structure. The CAISO believes that
18 a central buyer can help ensure that backstop procurement is truly a last resort that occurs only if
19 the forward procurement actions of LSEs and a central buyer prove deficient. The CAISO defers
20 to the Commission, its jurisdictional LSEs, and resource owners to designate a central buyer.
21 The CAISO's revised resource adequacy timeline provides the Commission with flexibility
22 regarding the authority, roles, and responsibilities of a central buyer. In its revised resource
23 adequacy timeline, the CAISO has proposed opportunities in which for a central buyer to
24 participate in the overall resource adequacy process (*see* Figure 2, below). The Commission and
25 the affected parties should determine whether a central buyer acts early or late in the resource
26 adequacy procurement window and what role a central buyer plays if individual or collective

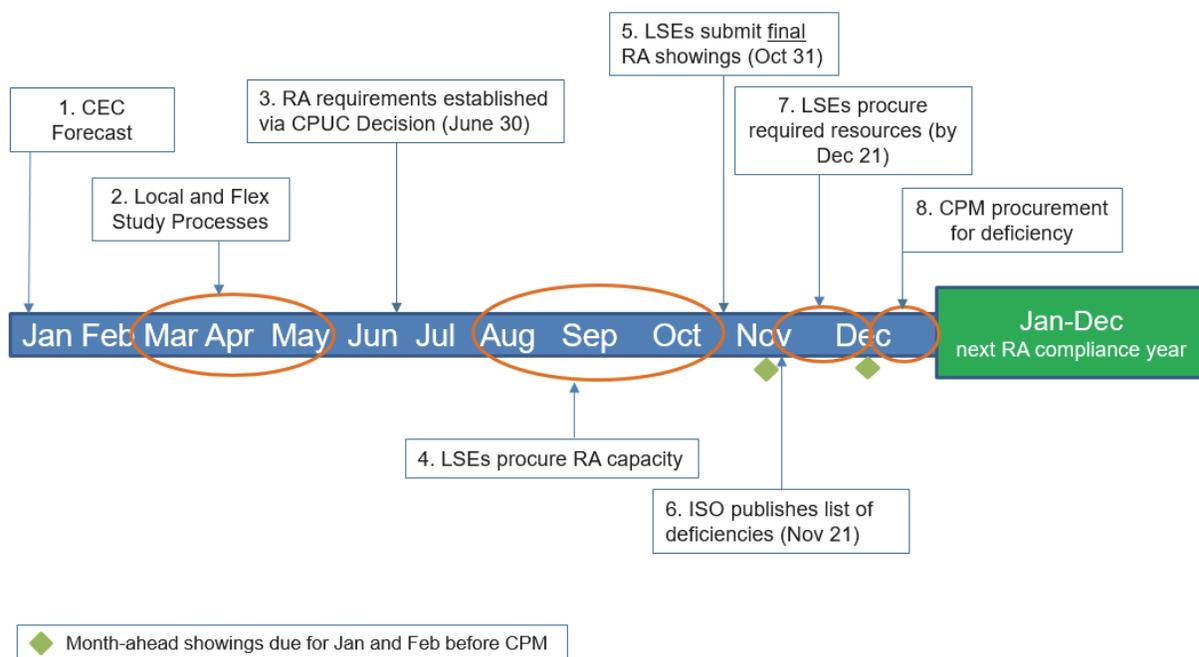
27 ² January monthly resource adequacy showings are due t-45 days prior to January 1, and February monthly resource
28 adequacy showings are due t-45 days prior to February 1. This means these showings are made by about November
15 and December 15, respectively.

1 deficiencies are identified by the CAISO. The CAISO will evaluate LSE showings at the
2 designated times, which should include any allocations to the LSEs from a central buyer.

3 Finally, the CAISO's proposed timeline works under a multi-year resource adequacy
4 procurement framework, allowing LSEs and a central buyer to conduct procurement and make
5 showings for the second and third resource adequacy compliance years as easily as it does for the
6 first.

7 II. Challenges Under the Existing Resource Adequacy Timeline

8 **Figure 1: Year-Ahead Timeline Under Current Resource Adequacy Framework**

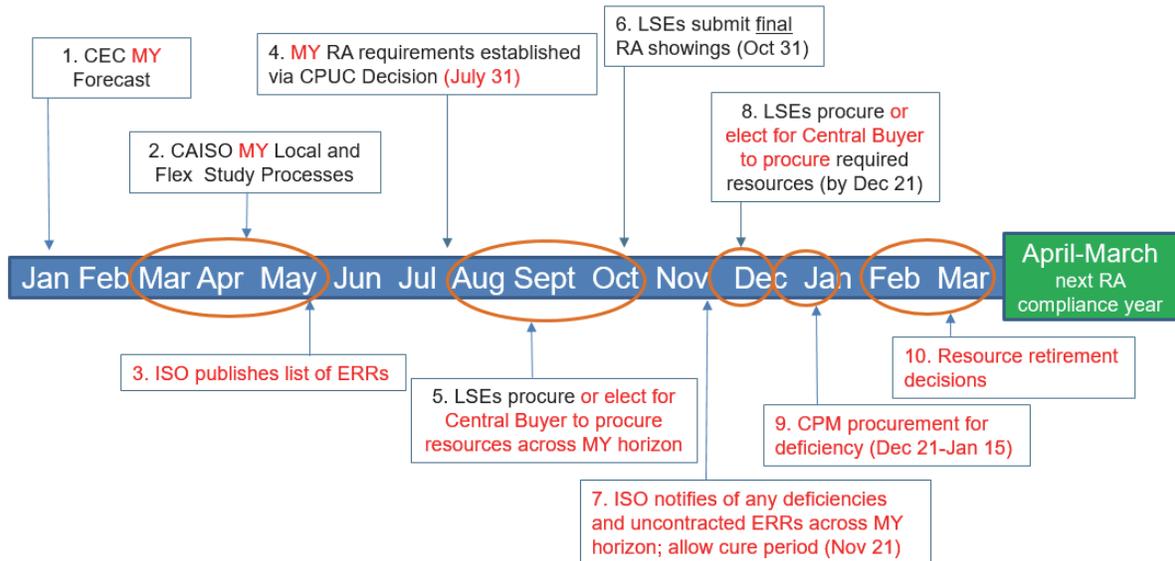


21 As portrayed in Figure 1, the current resource adequacy compliance year runs from
22 January 1 through December 31. Resource adequacy planning and residual procurement
23 processes occur primarily in the year prior to the resource adequacy compliance year. The initial
24 planning input is the load forecast developed by the CEC. The CEC aims to publish the load
25 forecast in December, prior to the planning and residual procurement processes. The CAISO
26 uses this load forecast as the basis of its flexible and local capacity technical studies and
27 deliverability studies. If the CAISO receives the final demand forecasts by December, it posts
28 drafts of these studies in early March of the year prior to the resource adequacy compliance year,

1 and the CAISO attempts to post the final results in early May (and no later than the end of June),
 2 for the resource adequacy compliance year beginning the subsequent January. The Commission
 3 uses the results of the CAISO’s local and flexible resource adequacy studies to set its LSEs’
 4 resource adequacy procurement requirements. LSEs currently have from August³ through
 5 October to procure any residual resource adequacy capacity and must submit their final resource
 6 adequacy showings to the CAISO by the last business day in October prior to the resource
 7 adequacy compliance year. After LSEs submit their final resource adequacy showings, the
 8 CAISO has 21 calendar days to post a report documenting individual and collective deficiencies.
 9 LSEs then have 30 calendar days to procure and show additional resource adequacy capacity to
 10 address deficiencies, if they so choose. After those 30 days, the CAISO may exercise its
 11 backstop authority to cure any remaining annual deficiencies, as necessary. This final step in the
 12 process occurs in late December, after the January and February monthly resource adequacy
 13 showings have been made.

14 **III. Enhancing the Resource Adequacy Process by Shifting the Timeline.**

15 **Figure 2: April to March Year-Ahead Timeline with Central Buyer**
 16 **Under Multi-Year (MY) Procurement Framework**



26 *Note: new timeline resolves current problem where Jan and Feb month-ahead showings occur before final CPM.*

28 ³ Although the Commission currently issues its final decision in the annual RA proceeding, it is subject to requests for rehearing for 30 days after the Commission approves the final decision.

1 To remedy challenges under the existing resource adequacy timeline, the CAISO
2 proposes the Commission shift the resource adequacy compliance year and the associated
3 planning and procurement processes as illustrated in Figure 2. The most significant proposed
4 change is moving from a January 1 to December 31 resource adequacy compliance year to an
5 April 1 to March 31 resource adequacy compliance year. To transition to the new April to
6 March resource adequacy compliance year for the first year in 2020, the CAISO recommends the
7 Commission extend the 2020 resource adequacy compliance year by three months so that it
8 begins on January 1, 2020 and runs through March 31, 2021. After the first year, the future
9 resource adequacy compliance years would run from April 1 through March 31. Therefore, the
10 2021 resource adequacy compliance year would run from April 1, 2021 through March 31, 2022.
11 This option is preferable to a shortened, three-month resource adequacy compliance period
12 between 2019 and 2020, which would add unnecessary complexity relative to approving a simple
13 extension of the 2019 resource adequacy compliance year. This change can be accomplished in
14 Track 2 with relative ease and it offers procedural and informational benefits to the planning
15 entities, LSEs, and resource owners.

16 **IV. Shifting the Resource Adequacy Compliance Year Allows Additional Time for** 17 **Planning and Procurement Processes.**

18 Under this revised resource adequacy timeline, the CEC will have adequate time to
19 complete its annual forecasts. Recent history shows the CEC has challenges generating its
20 annual load forecast by December due to the growing complexity and granularity of the forecast.
21 The CAISO's revised resource adequacy timeline would enable the CEC to submit its multi-year
22 load forecast by late-January or early February of the year prior to the resource adequacy
23 compliance year. With final demand forecasts produced by the CEC in late January or early
24 February, the CAISO would then be able to publish draft multi-year local and flexible resource
25 adequacy studies in mid- to late March and final results by mid-May. The CAISO's revised
26 schedule provides that the Commission will issue a decision adopting resource adequacy
27 requirements by the end of July. This schedule provides an additional month to vet the CAISO's
28 local and flexible capacity study results compared to the resource adequacy process.

1 The Commission's July resource adequacy decision would contain the allocation of
2 resource adequacy requirements to LSEs and identify a central buyer, and specify its roles and
3 responsibilities, including when a central buyer will act within the procurement period. The
4 primary procurement period would remain from August to October, with LSEs and/or a central
5 buyer submitting final multi-year procurement showings on the last business day in October.

6 After submittal of the final multi-year resource adequacy showings, the CAISO would
7 conduct reliability assessments based on the procured resources and identify any deficiencies
8 within the multi-year window. Upon completion of these assessments, the CAISO would
9 publish identified deficiencies and list any remaining ERRs not procured or only partially
10 procured. The LSE or a central buyer, as designated by the Commission, would have a one-
11 month period to cure any deficiencies and procure remaining ERR capacity. The CAISO
12 includes a cure period to resolve any deficiencies that could occur based on the effectiveness of
13 the initial LSE and/or central buyer procurement. The cure period could be abbreviated to allow
14 more time for other resource adequacy processes if a central buyer is the sole entity responsible
15 for curing deficiencies. However, if the LSEs are permitted to individually resolve any
16 collective deficiencies before a central buyer takes additional action, more time may be needed.
17 Thus, the CAISO's proposal provides a lengthier cure period to accommodate LSE procurement,
18 should this be the Commission's preference. Finally, the LSEs or a central buyer would be
19 required to submit a showing of any additional procurement by December 21. Following this
20 cure period, the CAISO could then exercise its backstop procurement authority to fill any
21 remaining deficiencies and procure any remaining ERRs by January 15.

22 **V. The Revised Resource Adequacy Process Provides Advance Notice to LSEs and**
23 **Resource Owners if there are Essential Resources Necessary to Maintain**
24 **Reliability.**

25 In addition to publishing the flexible and local resource adequacy studies, the CAISO
26 proposes to identify resources in local areas that are necessary for reliability over the three-year
27 procurement horizon. The CAISO's existing local capacity technical studies identifies capacity
28 needs in areas and sub-areas, and also identifies resources – and their effectiveness factors – that

1 could meet the needs. This provides general direction to inform LSE procurement. However,
2 the CAISO proposes to provide additional information about resources essential to reliability
3 when the area or sub-area need is dependent on one specific resource or a set of specific
4 resources for which there is no viable competition or alternative.

5 Identifying the ERRs is a logical extension of the CAISO's existing study efforts, and the
6 additional clarity this provides will reduce uncertainty in subsequent procurement processes
7 conducted by LSEs. Providing notice of the ERRs to LSEs and resource owners enables LSEs
8 and/or a central buyer to consider these resources when making their procurement decisions. It
9 will facilitate procurement of needed resources in the first instance by LSEs, reduce the need for
10 CAISO procurement, and send a signal to certain generators that they are required for reliability,
11 thus assuring them of a revenue stream and supporting any major maintenance efforts.

12 The CAISO proposes to identify and publish a list of ERRs in mid-May, concurrently
13 with the final local capacity technical study. ERRs are those resources, or specific combination
14 of resources, in a local capacity area or sub-area that are essential to reliability and no other
15 resources exist serve that area's needs. For example, a sub-area has two 300 MW resources, and
16 the resource adequacy requirement is 500 MW. The CAISO would classify both resources as
17 ERRs since both resources are essential. However, if a local area has six resources and only four
18 are required to meet the local resource adequacy requirement, then there is some opportunity for
19 LSEs to procure a variety of different combinations of these resources to meet the local need, so
20 those resources would not be listed as ERRs, even though four of the six resources will be
21 essential in the end.

22 The CAISO will refine how it classifies ERRs, but the critical piece of the CAISO's
23 proposal is that a list of ERRs will be published in advance indicating which resources must be
24 procured for local reliability across the resource adequacy procurement horizon (three years) or
25 if the ERR is replaced during the procurement horizon with a suitable alternative.

1 **VI. The Revised Resource Adequacy Timeline Allows the CAISO to Allocate Annual**
2 **Capacity Procurement Mechanism Designations Prior to and Monthly Showings.**

3 By shifting the resource adequacy compliance year to April 1 through March 31, the
4 CAISO's capacity procurement mechanism (CPM) designations would occur prior to the first
5 month ahead showing of the resource adequacy compliance year, which would be due in mid-
6 February for the month of April. This ensures that LSEs submit all month-ahead showings after
7 the CPM designations are made. Because the first monthly resource adequacy showings are not
8 due until February 15, all LSEs would receive credit for any annual CPM designations for the
9 entire resource adequacy compliance year. Under the multi-year resource adequacy construct,
10 backstop procurement of ERRs would occur across the three-year procurement horizon, or until
11 replacement resources are expected to be in place.⁴

12 Because the CAISO's proposed time allows for a central buyer to procure capacity well
13 in advance of when the CAISO conducts its backstop procurement, the CAISO is not
14 recommending a limit on how much procurement an LSE can defer to a central buyer. The
15 amount of procurement an LSE defers to a central buyer would be up to each individual LSE.
16 This deferment works under the proposed framework since any LSE with an individual
17 deficiency would be allocated procurement costs first by a central buyer (and by the CAISO
18 should backstop procurement be necessary). Additionally, by introducing a central buyer, the
19 Commission could remove its waiver rule to provide optionality and flexibility to LSEs who
20 want to use the procurement services and buying power of a central buyer.

21 **VII. The Revised Resource Adequacy Timeline Provides Resource Owners Additional**
22 **Time to Make Informed Retirement Decisions.**

23 Moving to an April 1 through March 31 resource adequacy compliance year provides
24 additional time after the CAISO's backstop procurement process for resource owners to make
25 more informed retirement and major maintenance decisions. Under the proposed timeline, the
26 CAISO would seek to finalize CPM designations by January 15 and the resource adequacy

27
28 ⁴ The CAISO recognizes it would have to develop a multi-year CPM capability to align with the multi-year resource adequacy procurement framework.

1 compliance year would begin April 1. Therefore, resource owners would have an additional two
2 months between CPM designation and the beginning of the resource adequacy compliance year
3 to plan retirement decisions.

4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

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.