

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

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

8 **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**  
9 **TRACK 2 TESTIMONY**

10 **CORRECTED CHAPTER 2: MULTI-YEAR RESOURCE ADEQUACY**  
11 **PROCUREMENT REQUIREMENTS**

12 SPONSORS: Karl Meeusen, Senior Advisor, Infrastructure and Regulatory Policy<sup>1</sup>

13 John Goodin, Manager, Infrastructure and Regulatory Policy<sup>2</sup>

14 **Proposal No. 1: The Commission Should Establish a Rolling Three-Year Procurement**  
15 **Requirement for Local, System, and Flexible Capacity**

16 In its June 25, 2018 Track 1 Decision (D.) 18-06-030 in this proceeding, the Commission  
17 requested that parties submit multi-year local resource adequacy procurement proposals that  
18 incorporate a central buyer structure.<sup>3</sup> The California Independent System Operator Corporation  
19 (CAISO) agrees that the Commission should adopt multi-year local resource adequacy  
20 requirements, but recommends that the Commission also adopt a holistic multi-year resource  
21 adequacy framework that includes three-year forward procurement requirements for system and  
22 flexible capacity. Simultaneously adopting a multi-year procurement framework for all three  
23 capacity products provides significant benefits, which include simplifying multi-year capacity  
24 allocations, ensuring more optimal and effective resource procurement, and informing the more  
25 fundamental challenge of providing for orderly retirement of non-essential gas-fired generation.

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27 <sup>1</sup> See Karl Meeusen's statement of qualifications, attached hereto as Appendix A.

<sup>2</sup> See John Goodin's statement of qualifications, attached hereto as Appendix B.

28 <sup>3</sup> See the Proposed Decision, <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M216/K634/216634123.PDF>  
at p. 32.

1 **I. A Comprehensive Multi-Year System, Flexible, and Local Resource Adequacy**  
2 **Framework Provides Administrative Efficiencies and Simplifies Cost Allocation.**

3 In its comments on the Track 1 Proposed Decision, San Diego Gas & Electric Company  
4 (SDG&E) raised concerns about implementing a new procurement framework for local resource  
5 adequacy without a consistent procurement framework for System and Flexible resource  
6 adequacy. Specifically, SDG&E stated:

7 [f]rom a technical perspective, if capacity is procured as solely Local or  
8 System (*i.e.*, the Flexible attribute is not recognized in the transaction), it  
9 is not possible to later amend the transaction to provide Flexible; the  
10 procurement of Flexible must occur at the time of the transaction. Thus,  
11 procuring only Local RA eliminates the fungibility of the capacity product  
12 – capacity that could be used for Flexibility purposes would be stranded  
13 since the Flexibility attribute was not recognized in the original  
14 transaction. Creating a stand-alone multi-year Local resource adequacy  
15 requirement means that LSEs would procure a multi-year Local-only  
16 capacity product, without the Flexible attribute.<sup>4</sup>

17 The CAISO agrees. At a minimum, the Commission would have to clarify in its policy  
18 guidance what the local capacity procurement requirements are across the procurement horizon,  
19 while the flexible attribute is only allocated for the next resource adequacy compliance year.  
20 Likewise, given the Commission’s policy of bundling local capacity with system capacity,<sup>5</sup> by  
21 setting up a multi-year central buyer for local capacity, the Commission would, in essence,  
22 tacitly set up a multi-year central buyer for system capacity as well. Under these circumstances,  
23 it makes sense to establish multi-year resource adequacy requirements for all local, system and  
24 flexible capacity commencing with the 2020 resource adequacy compliance year.

25 At a minimum, if the Commission adopts only multi-year local capacity procurement  
26 requirements, it must clarify the cost allocation process for system or flexible capacity procured  
27 by a central buyer, given the temporal split in how resource attributes would be allocated in year  
28 one versus across the multi-year procurement horizon. There is a clear efficacy and simplicity to  
establishing multi-year procurement now for all resource adequacy capacity types.

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<sup>4</sup> See SDG&E’s comments, <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M216/K330/216330821.PDF> at p. 5.

<sup>5</sup> See 2018 Filing Guide for System, Local and Flexible Resource Adequacy (RA) Compliance Filings, <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442454920> at p. 13.

1 **II. System Needs Warrant Multi-Year System and Flexible Resource Adequacy**  
2 **Requirements.**

3 The CAISO notes that 2017 was one of the more operationally challenging years over the  
4 past ten years. The CAISO was able to maintain reliability, but it made several capacity  
5 procurement mechanism (CPM) designations and declared the first Stage 1 system emergency<sup>6</sup>  
6 since 2007.<sup>7</sup> Challenges extend beyond local resource adequacy issues. The CAISO is  
7 concerned about the challenges ahead meeting the net load peak and enabling existing resources  
8 to undertake necessary capital maintenance and remain available as the system grows more  
9 dependent on availability-limited and intermittent resources. The CAISO’s 2018 Summer  
10 Assessment shows, largely due to below average hydro conditions, a 50 percent probability that  
11 the CAISO may call a Stage 2 system emergency in 2018.<sup>8</sup> Establishing a multi-year  
12 procurement framework for system, local, and flexible capacity now would enable parties to  
13 focus efforts on designing the holistic solution, which would avoid the time, effort, and energy  
14 required to come back later and revisit how best to add-on a multi-year system and flexible  
15 capacity procurement framework to an existing multi-year local capacity procurement  
16 framework. The Commission has the unique opportunity to holistically address these issues  
17 now, and avoid unnecessary churn and major revisions at a later date.

18 The CAISO also notes the central procurement entity can optimize procurement across all  
19 available resources to maximize efficient overall procurement and ratepayer benefits. Limiting  
20 multi-year procurement to only local resource adequacy capacity may prevent opportunities to  
21 procure cost-effective system and flexible capacity across the multi-year procurement horizon  
22 from local capacity resources. Establishing a multi-year resource adequacy procurement  
23 framework that addresses all needs simultaneously helps ensure the overall lowest procurement

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24 <sup>6</sup> See the CAISO’s System Alerts Warning and Emergencies Fact Sheet at  
25 <https://www.caiso.com/Documents/SystemAlertsWarningsandEmergenciesFactSheet.pdf>.

26 <sup>7</sup> A complete summary of CAISO declared Restricted Maintenance Operations, Alerts, Warnings, Emergencies, and  
27 Flex Alert Notices Issued from 1998 to Present can be found here:  
28 [http://www.caiso.com/Documents/Alert\\_WarningandEmergenciesRecord.pdf](http://www.caiso.com/Documents/Alert_WarningandEmergenciesRecord.pdf).

<sup>8</sup> Specifically, in its 2018 Load and Resource Assessment, the CAISO finds that “over half of the 2,000 scenarios  
(1,055) produce at least one hour of potential Stage 2 Emergency conditions with the majority of these (767 =  
541+226) being only 1-2 hours over the entire summer season.”  
<http://www.caiso.com/Documents/2018SummerLoadsandResourcesAssessment.pdf>, at p. 29.

1 cost for the greatest number of capacity products, thereby yielding the greatest opportunity for  
2 rate payer savings.

3 **III. Multi-Year System, Local, and Flexible Resource Adequacy Requirements Will**  
4 **Facilitate Orderly Retirement.**

5 As noted above, the CAISO believes an important objective of a multi-year resource  
6 adequacy framework is to inform procurement *and* retirement decisions. Including system and  
7 flexible capacity in the multi-year resource adequacy framework will better inform and facilitate  
8 the orderly retirement of resources by identifying and providing advance notice to resources that  
9 are necessary to maintain reliability. Additionally, including multi-year resource adequacy  
10 requirements for system and flexible will also better align resource adequacy with procurement  
11 conducted under the Commission’s IRP and other related proceedings by providing better  
12 information regarding how actual procurement aligns with the IRP study assumptions.

13 **IV. Multi-Year Resource Adequacy Procurement Obligations.**

14 For system and local resource adequacy needs, the CAISO proposes 100 percent resource  
15 adequacy capacity procurement obligations for the first and second compliance years and 80  
16 percent in the third year. Requiring 100 percent procurement obligations in the first two years  
17 for system and local is necessary to facilitate a systematic retirement process. For example, a  
18 resource that is designated resource adequacy capacity in year one, but not in years two or three,  
19 has a clear indication that it will not likely be needed in the future. Requiring two-year forward  
20 100 percent procurement also ensures that essential resources are procured if needed. Any  
21 procurement level less than 100 percent in the second year would potentially risk the retirement  
22 of marginal resources essential to maintaining reliability, before they can be replaced.

23 Additionally, multi-year resource adequacy requirements provide resource owners additional  
24 information to determine whether to make investments in major maintenance to keep the  
25 resource operationally reliable.

26 The CAISO’s proposal recognizes that flexible resource adequacy procurement  
27 obligations are in flux. The CAISO’s Flexible Resource Adequacy Criteria and Must-Offer  
28 Obligation – Phase 2 (FRACMOO2) stakeholder initiative is substantively aligned with the

CAISO’s Day-Ahead Market Enhancement (DAME) initiative, by ensuring that forward procurement of flexible resource attributes supports the CAISO’s operational needs. With the scheduled delay in the DAME, a commensurate one-year deferral of FRACMOO2 is necessary. The CAISO recognizes a delay in reforming flexible resource adequacy needs could create regulatory risk for LSEs procuring multi-year flexible capacity. As a result, the CAISO proposes lower flexible resource adequacy procurement obligations until FRACMOO2 is concluded.

More specifically, the CAISO proposes that for the first annual multi-year resource adequacy program cycle (2020 to 2022), flexible resource adequacy requirements should be set to 100 percent for 2020 and to 80 percent for the 2021 and 2022 resource adequacy compliance years.<sup>9</sup> The FRACMOO2 policy is scheduled to be finalized and implemented by fall 2020. Thus, the CAISO proposes that for the second annual multi-year resource adequacy program procurement cycle (2021 to 2023), the flexible capacity procurement requirements should be set consistent with system and local, *i.e.*, at 100 percent for the first two compliance years, and 80 percent for the third year for the prudent reasons described above. The CAISO’s proposed procurement targets are detailed in Table 1 below.

**Table 1**  
**Procurement Amounts by Capacity Type across the Procurement Horizon**

<i>Capacity Type</i>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<i>System</i>	100%	100%	80%
<i>Local</i>	100%	100%	80%
<i>Flexible (pre-FRACMOO2)</i>	100%	80%	80%
<i>Flexible (post-FRACMOO2)</i>	100%	100%	80%

<sup>9</sup> The CAISO has reviewed resource adequacy showings relative to the currently proposed flexible capacity products in the FRACMOO2 initiative. Based on this review and the broader need to ensure sufficient system capacity is procured, the CAISO does not foresee the currently proposed FRACMOO2 capacity requirements having a material impact on the resource mix procured to meet system resource adequacy requirements in the short term (*i.e.*, two to three years into the future).

1 **V. The CAISO Is Prepared to Conduct Studies to Support Multi-Year Procurement**  
2 **Obligations as Necessary.**

3 The CAISO understands that any transition to multi-year resource adequacy procurement  
4 will require changes to existing CAISO study processes. The CAISO is currently reviewing all  
5 of its study processes and believes it is capable of performing all of the needed studies to support  
6 a multi-year resource adequacy framework. For example, in the most recent resource adequacy  
7 cycle, the CAISO provided a forecast for the next three years of flexible resource adequacy  
8 requirements, demonstrating the CAISO is capable of meeting some of the additional study  
9 needs. To date, the CAISO has not identified any critical obstacle to providing the local or  
10 flexible analyses that would be necessary to support any multi-year resource adequacy  
11 procurement framework.

**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.

**Appendix B**

**Statement of Qualifications**

**John Goodin, Manager, Infrastructure and Regulatory Policy**

## Statement of Qualifications

John Goodin – Manager, Infrastructure and Regulatory Policy at the California ISO

Mr. Goodin has over 30 years' experience in the electric industry. In 1997, he was a part of the original start-up team for the California ISO (CAISO). Prior to joining the California ISO, Mr. Goodin worked at Pacific Gas & Electric Company for 10 years serving in various roles.

Mr. Goodin's current responsibilities at the California ISO include:

- Managing the Infrastructure and Regulatory Policy Team. This team is responsible for formulating the CAISO's market design and policies related to:
  - Resource adequacy and procurement
  - Transmission Infrastructure
  - Demand Response
  - Distributed Energy Resources

Mr. Goodin holds a Bachelor of Science in Mechanical Engineering from California Polytechnic State University, San Luis Obispo.