

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

Order Instituting Rulemaking to Continue  
Electric Integrated Resource Planning and  
Related Procurement Processes.

Rulemaking 20-05-003  
(Filed May 7, 2020)

**OPENING COMMENTS ON PROPOSED AND ALTERNATE PROPOSED DECISION  
REQUIRING PROCUREMENT TO ADDRESS MID-TERM RELIABILITY (2023-2026)  
OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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**I. Introduction**

The California Independent System Operator Corporation (CAISO) provides opening comments on the proposed *Decision Requiring Procurement to Address Mid-Term Reliability 2023-2026* (PD) and Alternate Proposed Decision of Commission Rechtschaffen (APD). The CAISO appreciates the opportunity to provide opening comments.

The CAISO strongly supports the PD's and APD's selection of the high-need scenario to authorize procurement of 11,500 MW of effective, incremental procurement. This will help address the retirement of the Diablo Canyon Power Plant and once-through cooling resources, while supporting overall reliability needs as the electric sector transitions to meet the goals of Senate Bill 100. Both the PD and APD take the necessary steps to address greater uncertainty and volatility caused by climate change and to ensure resources needed during the energy transformation can meet demand in the early evening hours. Both the PD and APD account for urgent near-term needs by accelerating procurement, and wisely look ahead to address unforeseen contingencies and growth in building and transportation electrification.

The CAISO generally supports both the PD and APD, but the PD provides more certainty in leveraging existing resources in a tight timeline to address the loss of over 6,000 MW of baseload or dispatchable capacity, while balancing various grid, community, cost, and environmental considerations. The Commission should consider whether incorporating aspects of the APD, such as including green hydrogen procurement, into the PD is feasible without delaying a final decision in this proceeding.

The Commission should make three changes to the PD and APD. First, the Commission should provide more flexibility for load serving entities (LSEs) to use imports to serve reliability

needs, including allowing LSEs to procure import capacity from existing resources to meet short-term needs. Second, the Commission should direct investor owned utilities (IOUs) to enter into long-term contracts with needed combined head and power (CHP) and qualifying facility resources that require efficiency upgrades rather than defaulting to CAISO to procure these resources under its backstop procurement authority. Finally, the Commission should ensure the reliability analyses used to support the mid-term procurement are linked to and coordinated with the resource adequacy proceeding.

## **II. Discussion**

The CAISO provides the following comments, which it divides into three broad categories: (1) specific resource and resource type procurement; (2) procurement-related processes; and (3) proposed typographical corrections.

### **A. The CAISO Generally Supports the Specific Resource and Resource Type Procurements.**

The CAISO generally supports the procurement pathways in the PD and APD. The subsections below address each procurement pathway with specific recommendations for each.

#### **1. Diablo Canyon Power Plant Replacement**

The CAISO supports directing LSEs to procure “at least 2,500 MW of firm, zero-emitting resources” providing energy starting in 2024, when the first generating unit at the Diablo Canyon Power will retire.<sup>1</sup> As discussed in more detail below, this procurement tranche is interrelated to the expedited 3,000 MW procurement in 2023, which the CAISO also supports, and the retirement of once-through-cooling resources.

#### **2. Imports**

The Commission should revise the PD and APD to allow for more flexibility so LSEs can procure imports to meet the procurement requirement. Specifically, LSEs should have the option to secure imports for shorter-term contracting (*i.e.*, from a few months or a few years) to provide more flexibility in meeting the procurements and facilitating expected resource retirements in a timely manner. These shorter-term imports should not displace the capacity requirements, but rather should be allowed as a stopgap measure to address any delays securing longer lead-time

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<sup>1</sup> PD, p. 2; APD, p. 2.

capacity. The Commission should not explicitly require these shorter-term import resources to show they are associated with new resources that come online after the date of the decision.<sup>2</sup> Instead, the Commission should modify the PD and APD to allow LSEs to secure imports to bridge any gaps associated with developing long-lead-time resources or other new capacity. The CAISO recommends these import resources meet the CAISO's proposed requirements for resource adequacy imports.<sup>3</sup>

The CAISO also agrees with the PD and APD requirements for longer-term imports that will count toward the procurement requirements. For longer-term imports, *i.e.*, imports that will meet the mid-term procurement requirements, the Commission should maintain the PD and APD requirement LSEs show the imports are associated with a new resource with a commercial online date after the date of the decision and are under a long-term contract of at least ten years.

### **3. Fossil-fuel resources**

The CAISO agrees with the PD and APD that during this grid transformation, it will be necessary to retain some natural gas-fired capacity. The CAISO agrees with the PD's explanation:

We also note that the risks are asymmetrical: failure to provide insurance to keep grid reliability is a far greater threat to public confidence and public health than running state-of-the-art fossil-fueled generators a few extra hours a year. In addition, adding a small amount of efficient natural gas capacity will not necessarily lead to an increase in the generation from fossil-fueled units overall, but rather will likely lead to less dispatch of the higher-emitting and less efficient units.<sup>4</sup>

Further extending the operation of the once-through cooling resources beyond 2023 is untenable, and the CAISO fully supports procuring an additional 3,000 MW of resources by 2023.<sup>5</sup> The PD and APD both recognize that 2,500 MW of incremental renewables and storage likely will replace the baseload capacity of Diablo Canyon to ensure the capacity is both zero-emission and online between 2023 and 2025.<sup>6</sup> Though the PD and APD refer to this capacity as "firm," it is unclear whether the combination of incremental renewables and storage will yield an

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<sup>2</sup> PD, p. 47; APD, p. 48.

<sup>3</sup> R.19-11-009, CAISO Track 3B.1 Proposals, January 28, 2021, pp. 2 - 6.

<sup>4</sup> PD, p. 41.

<sup>5</sup> PD, p. 40; APD, pp. 40-41.

<sup>6</sup> PD, p. 46; APD, pp. 46-47. The PD describes the renewables as "incremental" whereas the APD describes the renewables as "co-located." Although the CAISO agrees that the renewables may be co-located, they must be incremental so that there is sufficient incremental energy to charge the new storage.

85 percent annual capacity factor, as defined elsewhere in the PD and APD. Instead, the PD and APD recognize resources that can meet an 85 percent annual capacity factor and limit emissions are potential long-lead-time resources that may not come online until 2026, at the earliest, or as late as 2028. Between these two potential bookend dates (*i.e.*, 2023 and 2028), the loss of Diablo Canyon’s high capacity factor output may necessitate using efficient natural gas-fired resources to reliably and efficiently operate the system. The CAISO agrees with the Commission that this will not necessarily lead to an increase in natural gas-fired energy production overall.

The PD and the APD both identify five types of modifications to existing sites that could produce incremental fossil-fuel generation to count toward the capacity requirements: (1) efficiency improvements, (2) uprates/upgrades, (3) expansions, (4) repowering at an operating facility, and (5) repowering at a mothballed or retired plant. These five categories appropriately balance the various grid, community, cost, and environmental considerations.<sup>7</sup>

The CAISO agrees with the PD and APD preference for long-term contracts for CHP units that are necessary to maintain system reliability.<sup>8</sup> The PD and APD correctly note the CAISO has designated many of these CHP units as reliability must run (RMR) units to maintain reliability.<sup>9</sup> The Commission should direct the IOUs to procure these resources to meet reliability needs rather than rely on CAISO RMR procurement.

Although the CAISO generally supports the PD and APD, the PD provides more certainty in leveraging existing resources. The Commission should consider whether incorporating aspects of the APD, such as including green hydrogen procurement, into the PD is feasible without delaying a final decision in this proceeding. The CAISO supports including green hydrogen resources as a supply option because they present another pathway to diversify the fleet and test a new fuel source at market-scale. This will provide meaningful feedback to the Commission and parties.

#### **4. Long-lead-time resources**

The CAISO supports including long-lead-time resources in the PD and APD procurement targets to diversify the resource fleet. The CAISO specifically supports requiring a minimum of 1,000 MW of long-duration storage and 1,000 MW of dispatchable and/or firm resources with

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<sup>7</sup> PD, pp. 42-45; APD, pp. 42-46.

<sup>8</sup> PD, p. 40.

<sup>9</sup> PD, p. 40; APD, p. 41.

zero or *de minimis* emissions.<sup>10</sup> The CAISO agrees with the characterization of long-duration storage as being “able to discharge over at least an eight-hour period, though... 12 hours or even multi-day storage options may be even more favorable, given the grid needs.”<sup>11</sup>

For the 1,000 MW minimum dispatchable and/or firm resources, the CAISO also agrees with the determination that qualifying resources should be “either firm (with a capacity factor of at least 85 percent) and/or dispatchable (during hours 17 and 22 daily) energy delivery.”<sup>12</sup> The CAISO’s understanding is this reflects either an 85 percent annual capacity factor and/or the ability to produce five continuous hours of energy between hour ending 17 through 22 (*i.e.*, 4:00 pm Pacific Daylight Time through 9:00 pm Pacific Daylight Time).<sup>13</sup> The CAISO also agrees that flexible geothermal resources would fit well into this category and could serve as a substitute for dispatchable gas.<sup>14</sup> Further, the CAISO agrees that a targeted 2026 online date,<sup>15</sup> one year after originally contemplated, allows LSEs more time to plan and procure the long-lead-time resources. If resource development is delayed beyond 2026, the Commission should require LSEs to backfill with import resources as necessary.

**B. The CAISO Generally Supports the Procurement-Related Processes But More Coordination with the Resource Adequacy Proceeding is Needed.**

The CAISO stands ready to work with the Commission through the CAISO’s transmission planning process. The PD and the APD provide for a February 1, 2023 compliance filing to check the status of long-lead-time resource procurement. At that time, the Commission will consider whether to grant LSEs an extension from 2026 to 2028 and may allow for IOU backstop if conditions are not met.<sup>16</sup> If the Commission grants an extension from 2026 to 2028 for long-lead-time resources, the CAISO recommends the Commission require LSEs to procure shorter-term imports to meet procurement targets, as described above. Without such a requirement, there may be a capacity shortfall and resulting failure to maintain reliability.

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<sup>10</sup> PD, p. 34; APD, p. 35.

<sup>11</sup> PD, pp. 34-35; APD, p. 35.

<sup>12</sup> PD, p. 35; APD, p. 35.

<sup>13</sup> If this understanding is incorrect, the Commission should clarify its intent.

<sup>14</sup> PD, p. 35; APD, p. 35.

<sup>15</sup> PD, p. 35; APD, p. 36.

<sup>16</sup> PD, p. 37; APD, p. 37.

## **1. The Commission Should Coordinate Mid-Term Procurement with the Resource Adequacy Proceeding.**

The PD and APD require LSEs to show the capacity procured under this mid-term procurement order as resource adequacy and to use marginal effective load carrying capability (ELCC) values recommended by the February 22, 2021 Administrative Law Judge ruling.<sup>17</sup> The CAISO supports this approach to link this mid-term procurement with the annual procurement process and the suggested workshop on these two topics.<sup>18</sup> To ensure the mid-term procurement is truly incremental to existing resources, the Commission should increase the planning reserve margin (PRM) in the resource adequacy proceeding. If the Commission does not increase the PRM, the additional procurement directed in this proceeding will merely substitute for existing contracts without creating incremental capacity, and it will not maintain the level of reliability the Commission is seeking. As the PD and APD note, “[s]hould the Commission decide to continue to use [a loss of load expectation] LOLE metric of 0.1... the PRM should be set at a level that accomplishes this reliability level, and the analysis should be regularly updated.”<sup>19</sup> Therefore, to maintain this level of reliability through the annual procurement process, the Commission should use the same PRM in the resource adequacy program.

For ELCC values, more coordination and discussion is needed in the resource adequacy proceeding. Though the CAISO supports using a marginal ELCC to guide mid-term procurement, it is unclear whether a marginal ELCC construct is best suited for the annual procurement process. Furthermore, there are proposals in the current resource adequacy proceeding to address resources with diminishing ELCC values.

Finally, the Commission should clarify whether the online dates are when the resource is first available for operation or when LSEs and suppliers show the resource as resource adequacy capacity. LSEs make their monthly resource adequacy showings at least 45 days prior to the start of the resource adequacy compliance month. The CAISO has emergency operational access to a resource as soon as it reaches commercial operation, but if a supplier does not show the resource to the CAISO on a monthly resource adequacy supply plan, it will not yet be subject to the CAISO’s tariff-based resource adequacy market rules and obligations.

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<sup>17</sup> PD, p. 70; APD, p. 70.

<sup>18</sup> PD, p. 77; APD, p. 78.

<sup>19</sup> PD, p. 11; APD, p. 12.



## 2. The CAISO Strongly Supports the Proposed Confidentiality Guidelines.

The CAISO supports the PD and APD determination on data confidentiality and agrees that revealing such data does not pose a risk to confidential or market-sensitive contractual information.<sup>20</sup> The CAISO stresses that the interconnection queue number is critical for quick resource identification, but the remaining data (*i.e.*, resource type, MW size and duration, expected commercial online month and year, CAISO participating transmission owner, locational description such as county, and utility footprint in which the resource is located) are necessary for modeling, tracking procurement progress, and updating the baseline. The CAISO also supports the commitment to post the final baseline list within 60 days after the effective date of this order.

### C. Typographical Corrections

The Commission should correct the totals in the last column in Table 6 of the PD, which does not appropriately reflect the cumulative procurement amounts listed in each row.<sup>21</sup>

### III. Conclusion

The CAISO appreciates the opportunity to provide comments on the PD and APD and looks forward to working with the Commission.

Respectfully submitted

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<sup>20</sup> PD, p. 68; APD, p. 69.

<sup>21</sup> PD, p. 49.