

**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 DECISION  
ADOPTING 2021 PREFERRED SYSTEM PLAN OF THE  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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**I. Introduction**

The California Independent System Operator Corporation (CAISO) submits comments on the Proposed *Decision Adopting 2021 Preferred System Plan* (Proposed Decision) of Administrative Law Judge Fitch.

The CAISO supports the vast majority of the Proposed Decision's directives and urges the Commission to adopt the Proposed Decision with the limited modifications summarized below. The CAISO will model the adopted Preferred System Plan (PSP) as the reliability and policy-driven base case in the CAISO's 2022-2023 transmission plan. The CAISO appreciates the significant work Energy Division staff has undertaken, such as detailed resource busbar mapping, to ensure that the CAISO can model the PSP.

The CAISO strongly supports the Proposed Decision's storage procurement directive to address the reliability needs identified on the Kern-Lamont system and at the Mesa 115 kV substation as identified by the CAISO's 2020-2021 transmission planning process (TPP). Commission action to align procurement with grid needs simultaneously (1) addresses load growth when and where needed, (2) avoids transmission expansion while meeting reliability needs, and (3) meets state clean energy goals. The Commission should continue this practice, potentially in the programmatic approach to IRP procurement described in the Proposed Decision.

The CAISO also supports the Proposed Decision’s decision to defer transmitting a high electrification sensitivity case unless and until there is a coordinated effort with the California Energy Commission on a high electrification demand forecast. This decision appropriately coordinates the major long-term planning, procurement and infrastructure processes while ensuring the CAISO’s TPP has the necessary input detail to provide meaningful results.

Lastly, there are numerous procurement, forecasting, and operational uncertainties related to supply and demand issues and the Commission should consider additional storage procurement in the mid-term or advancing procurement from later years.

## **II. Discussion**

The CAISO provides detailed comments regarding storage procurement to address grid reliability needs, the proposed high electrification sensitivity case, and whether additional storage procurement should be considered to account for procurement, forecast, and operational uncertainties. The CAISO also supports numerous planned improvements described in the Proposed Decision.

### **A. The Commission Should Adopt the Proposed Decision’s Storage Procurement Proposals for the Kern-Lamont and Mesa Substation Projects**

The CAISO strongly supports the Proposed Decision’s storage procurement directive to address the reliability needs the CAISO identified on the Kern-Lamont system and at the Mesa 115 kV substation in its 2020-2021 transmission planning process. The Proposed Decision directs Pacific Gas and Electric (PG&E) to conduct a competitive solicitation for a 95 MW battery storage resource at the Kern-Lamont substation and identify a 50 MW four-hour storage project battery storage resource at the Mesa 115 kV substation.<sup>1</sup> The CAISO supports the Proposed Decision’s directive for PG&E to provide interim process check-ins coordinated with potential CAISO backstop action.

For the proposed 95 MW battery storage resource to address reliability issues at the Kern-Lamont substation, the Proposed Decision requires PG&E to “show significant progress by filing a Tier 2 Advice Letter by August 1, 2022 showing that this resource will be online by Summer

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<sup>1</sup> Proposed Decision, pp. 157-158.

2023 to meet the transmission needs found by the CAISO.”<sup>2</sup> If there is insufficient progress, the CAISO could still move forward with a transmission upgrade to meet reliability needs.

Regarding the proposed 50 MW four-hour storage project at the Mesa substation, the Proposed Decision directs PG&E to submit a Tier 1 Advice Letter by April 1, 2022 to address identified reliability by the end of 2022.<sup>3</sup>

Commission action to align procurement directly with grid needs will (1) address load growth when and where needed, (2) avoid transmission expansion while meeting reliability needs, and (3) meet state clean energy goals. The Commission should also “establish a more predictable process for how similar transmission mitigation or other system benefit projects might be evaluated and approved” as proposed in the Proposed Decision and discussed below.<sup>4</sup> As with the Kern-Lamont and Mesa substation projects, the Commission should continue to address reliability needs considering the CAISO’s TPP analysis.

#### **B. The Commission Should Work With the California Energy Commission on High Electrification Demand Forecasts**

The CAISO supports the Proposed Decision’s conclusion to defer transmitting a high electrification sensitivity case unless and until there is a coordinated effort with the California Energy Commission (CEC) to develop a high electrification demand forecast.<sup>5</sup> This decision appropriately coordinates the major long-term planning, procurement, and infrastructure processes while ensuring the CAISO’s TPP has the necessary input detail to provide meaningful results. The CAISO further recognizes this work is being developed under tight time constraints. Unfortunately this may limit “opportunity for further stakeholder input on this portfolio at the proceeding level, prior to CAISO’s utilization of the portfolio as an input to the TPP” or limit the review each portfolio receives.<sup>6</sup> The CAISO is committed to working closely with CPUC and CEC staff to develop a high electrification demand forecast derivative of the Integrated Energy Policy Report (IEPR) process and its companion resource portfolio that can be used in TPP analysis.

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<sup>2</sup> Proposed Decision, p. 157.

<sup>3</sup> Proposed Decision, p. 158.

<sup>4</sup> Proposed Decision, p. 158.

<sup>5</sup> Proposed Decision, p. 117.

<sup>6</sup> Proposed Decision, p. 117.

### **C. The Commission Should Adopt a Two-Year Cycle and Consider Higher Mid-term Storage Procurement to Prepare for Uncertainties.**

The CAISO supports a two-year cycle with a Preferred System Plan adopted every two years and updates “where necessary to incorporate key new inputs such as load forecast information from the IEPR.”<sup>7</sup> The CAISO also urges the Commission to include in its update (both in and between Preferred System Plan run years) pertinent information from the CAISO’s TPP. The two-year cycle strikes the appropriate balance between modeling the most up-to-date information and allowing time necessary to develop and conduct detailed analyses. The CAISO also agrees that retaining the Reference System Plan on an as-needed basis is both necessary and prudent.<sup>8</sup>

The CAISO observed that the 38 MMT Core Portfolio from the Proposed Decision has slightly fewer battery storage resources than a similar portfolio from the Administrative Law Judge’s Ruling Seeking Comments on Proposed Preferred System Plan (ALJ Ruling).<sup>9</sup> The reduction seems to be driven by appropriate updates and improvements Energy Division staff made to the modeling assumptions and inputs in RESOLVE<sup>10</sup> and SERVVM.<sup>11</sup> However, the CAISO notes that there are numerous procurement, forecasting, and operational uncertainties that may justify higher battery storage procurement.

For example, the portfolio continues to rely on approximately 1,000 MW each of geothermal and pumped (long-duration) storage to come online by 2028. A higher battery storage procurement in the mid-term can serve as a buffer against resource delays and the planned 2024 Diablo Canyon Power Plant decommissioning. On the demand side, the draft 2021 IEPR forecast peak is even higher and, for the first time, includes fuel substitution impacts.<sup>12</sup> The draft 2021 IEPR forecast is higher than the 2020 vintage by over 1,100 MW in 2024 and over 2,300 MW in 2030. Storage is still a very new resource in the CAISO markets and, as such, any current observations regarding usage may change over time. For example, changes in tax credits and other financial incentives, contractual obligations, or wear and tear may limit battery

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<sup>7</sup> Proposed Decision, pp. 69-70.

<sup>8</sup> Proposed Decision, p. 69.

<sup>9</sup> Proposed Decision, Table 5. *New Resource Buildout of 38 MMT Core (Cumulative MW)*, p. 100 and ALJ Ruling, Table 2: *New Resource Buildout of 38 MMT Core (Cumulative MW)*, p. 16.

<sup>10</sup> Proposed Decision, p. 98.

<sup>11</sup> Proposed Decision, p. 101.

<sup>12</sup> California Energy Commission, *Draft 2021 Integrated Energy Policy Report - Volume IV California Energy Demand Forecast*, Docket 21-IEPR-01, December 7, 2021.

operation compared to today. When the Preferred System Plan is updated with the final 2021 IEPR forecast, the Commission should consider whether additional storage procurement in the mid-term or advancing procurement from later years can account for procurement, forecast, and operational uncertainties.

#### **D. The Commission Should Adopt Numerous Improvements Described in the Proposed Decision**

The Commission should adopt several improvements described in the Proposed Decision. The CAISO supports the Commission conducting a retirement analysis in 2022 and commits to working with the Commission and state agencies.<sup>13</sup> The CAISO also agrees with the Proposed Decision that the Commission should coordinate this effort with additional analysis of local resources to “better understand how to advance the policy objectives of reducing reliance on Aliso Canyon, reducing dispatch of natural gas generation, and contributing to an ‘orderly’ retirement of the fossil-fueled generation fleet as it ages.”<sup>14</sup> Discussions regarding the local capacity areas should leverage the detailed technical analyses the CAISO has already performed in its annual local capacity studies and the CAISO’s 20-Year Transmission Outlook, and other state processes. The CAISO also looks forward to the Commission’s developing a “more sophisticated modeling toolkit beginning in 2022” to address local areas.<sup>15</sup>

The Commission should develop programmatic procurement requirements as outlined in the Proposed Decision.<sup>16</sup> The CAISO suggests including in this programmatic approach Commission action to align procurement directly with grid needs by considering the CAISO’s TPP analysis. As with the Kern-Lamont and Mesa substation projects, a standardized process can greatly increase efficiency and ensure reliability.

### **III. Conclusion**

The CAISO appreciates the significant work the Commission and Energy Division staff have taken on to improve the integrated resource planning process year over year. The CAISO overwhelmingly supports the Proposed Decision and urges the Commission to adopt it. The

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<sup>13</sup> Proposed Decision, p. 132.

<sup>14</sup> Proposed Decision, p. 162.

<sup>15</sup> Proposed Decision, p. 162.

<sup>16</sup> Proposed Decision, p. 149.

CAISO looks forward to working with the Commission on additional improvements described in the Proposed Decision.

Respectfully submitted

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