

183 FERC ¶ 61,149  
FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, DC 20426

May 25, 2023

In Reply Refer To:  
California Independent System Operator  
Corporation  
Docket No. ER23-1485-000

California Independent System Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630

Attention: William H. Weaver  
Assistant General Counsel

Dear Mr. Weaver:

1. On March 28, 2023, pursuant to section 205 of the Federal Power Act,<sup>1</sup> the California Independent System Operator Corporation (CAISO) proposed revisions to its Open Access Transmission Tariff (Tariff) to extend the minimum state of charge (MSOC) requirement for resource adequacy storage resources until the earlier of (a) September 30, 2023, or (b) the implementation of CAISO's planned exceptional dispatch state of charge enhancements (dispatch enhancements).<sup>2</sup> CAISO states that without a short extension, the MSOC requirement would sunset on June 1, 2023, potentially leaving CAISO without the necessary tools to ensure reliable operations this summer.<sup>3</sup> In this order, we accept the proposed revisions, effective May 28, 2023, as requested.

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<sup>1</sup> 16 U.S.C. § 824d.

<sup>2</sup> CAISO Transmittal at 1; CAISO, CAISO eTariff, § 40.5.1 (Operation of the MSOC Tool) (6.0.0).

<sup>3</sup> CAISO Transmittal at 1.

2. CAISO states that it implemented the MSOC requirement in 2021 as part of its resource adequacy enhancements.<sup>4</sup> CAISO references the Commission’s previous finding in the CAISO MSOC Order, which determined that the MSOC requirement addressed several challenges to CAISO operations, including: (1) the need for storage to charge before discharging energy onto the grid; and (2) CAISO’s real-time market’s horizon being too short to manage the typical charge/discharge cycle.<sup>5</sup> CAISO further notes that the Commission found the MSOC requirement “serves as an enhanced optimization of the real-time market on days with tight supply to take into account the inability of that market to optimize across an entire trading day.”<sup>6</sup>

3. CAISO states that its energy storage enhancements stakeholder initiative began in May 2021, shortly after CAISO submitted the MSOC requirement for Commission approval. CAISO states that the initiative concluded in December 2022 following the approval of new enhancements for storage and hybrid resources by the CAISO Board of Governors and the Western Energy Imbalance Market Governing Body. CAISO asserts that the enhancements, which it plans to submit for Commission review later this year, will allow for CAISO operators to monitor and manage storage resources’ state of charge and issue exceptional dispatches for storage resources to charge to or hold at a specific state of charge. However, CAISO explains that it cannot develop, test, and implement the software for these enhancements before the expiration of the MSOC requirement.<sup>7</sup>

4. CAISO states that, to ensure reliability during peak demand conditions this summer, it proposes to delay the sunset of the MSOC requirement. CAISO explains that the extension will allow for the MSOC requirement to be available to CAISO operators through this summer, unless CAISO implements its new energy enhancements.<sup>8</sup> CAISO further asserts that the Commission acknowledged that CAISO only utilizes the MSOC tool on days when the Residual Unit Commitment process cannot find a feasible solution without adjusting the original constraints,<sup>9</sup> namely, “when there is not enough supply

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<sup>4</sup> CAISO Transmittal at 2 (citing *Cal. Indep. Sys. Operator Corp.*, 175 FERC ¶ 61,168, at P 31 (2021) (CAISO MSOC Order)).

<sup>5</sup> *Id.* (quoting CAISO MSOC Order, 175 FERC ¶ 61,168 at PP 15-16).

<sup>6</sup> *Id.* (quoting CAISO MSOC Order, 175 FERC ¶ 61,168 at P 34).

<sup>7</sup> *Id.* at 6.

<sup>8</sup> *Id.* at 7.

<sup>9</sup> *Id.* at 2 (quoting CAISO MSOC Order, 175 FERC ¶ 61,168 at P 16 n.17 (citing “Residual Unit Commitment,” CAISO Tariff, app. A, Residual Unit Commitment (RUC) (1.0.0))).

available in the day-ahead timeframe to meet CAISO's forecast load and, therefore, the capacity from all resources, including resource adequacy storage resources, is crucial to meet demand at net peak load."<sup>10</sup> CAISO emphasizes that if the new energy storage enhancements are implemented prior to the end of the summer, it will submit new Tariff revisions removing the MSOC requirement from the Tariff altogether.<sup>11</sup>

5. CAISO asserts that its proposed Tariff revision to extend the MSOC requirement is just and reasonable because the revision extends an existing, Commission-approved policy for one additional summer to help ensure reliability. Additionally, CAISO emphasizes that the MSOC requirement has worked as intended, as it has only been used in extreme circumstances and storage resources still have had ample opportunity to avail themselves of market opportunities.<sup>12</sup>

6. Notice of CAISO's March 28, 2023 filing was published in the *Federal Register*, 88 Fed. Reg. 19948 (Apr. 4, 2023) with interventions and protests due on or before April 18, 2023.

7. Timely motions to intervene were filed by Pacific Gas and Electric Company, Calpine Corporation, Boston Energy Trading and Marketing LLC, Northern California Power Agency, City of Santa Clara, California, the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California, and Vistra Corp. and Dynegy Marketing and Trade, LLC. Timely motions to intervene and comments were filed by the Department of Market Monitoring of the California Independent System Operator Corporation (DMM) and Marin Clean Energy (MCE).

8. On April 28, 2023, CAISO filed an answer to the comments of MCE.

9. DMM states that while it would be best to implement the new dispatch enhancements rather than extend CAISO's authority to use the MSOC constraint, DMM supports the proposed Tariff revisions given that CAISO is unable to employ the dispatch enhancements by this summer. Further, DMM states that without the MSOC requirement or the replacement dispatch enhancements in place this summer, managing batteries may be significantly more difficult for CAISO operators in tight system conditions. DMM

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<sup>10</sup> *Id.* at 3 (quoting CAISO MSOC Order, 175 FERC ¶ 61,168 at P 32).

<sup>11</sup> *Id.* at 7.

<sup>12</sup> *Id.*

asserts that given potential reliability risks, it supports CAISO's proposed Tariff revisions.<sup>13</sup>

10. MCE states that it does not oppose a temporary extension of the MSOC requirement; however, it is interested in CAISO's timing of exceptional dispatch of energy storage resources and the impact exceptional dispatch may have on resource operations and compensation through the remainder of the operating day. For example, MCE states that it is concerned that if CAISO exceptionally dispatches a storage resource early in the day to completely discharge the resource by hour ending 1400, energy storage resources would be required by the MSOC requirement to charge at much higher prices if they wish to discharge during the evening ramp.<sup>14</sup>

11. MCE also requests that CAISO address the lost opportunity costs for maintaining charge.<sup>15</sup> MCE notes that when CAISO exceptionally dispatches resources to hold a state of charge, storage resources receive almost no compensation as CAISO does not compensate the resource for lost opportunity costs to hold the state of charge.

12. In its answer to MCE, CAISO asserts that MCE's concerns were addressed directly by CAISO's simultaneous filing to implement its energy storage enhancements in a separate Commission proceeding.<sup>16</sup> CAISO states that it included data on the exceptional dispatch of storage resources in the 2022 Summer Market Performance Report,<sup>17</sup> which it quoted throughout its transmittal letter in this proceeding.<sup>18</sup> CAISO notes that it only issued exceptional dispatches on three days in September 2022 and that those dispatches were all to charge or to hold a state of charge. CAISO asserts that without the energy storage enhancements, storage resources could lose revenues if they receive the exceptional dispatches described in MCE's hypotheticals; however, it believes that MCE's hypotheticals are extremely unlikely as CAISO has not seen market or grid conditions that would necessitate such an unlikely result. Further, CAISO notes that its Tariff revisions address MCE's concerns regarding lost opportunity costs for

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<sup>13</sup> DMM Comments at 2-5.

<sup>14</sup> MCE Comments at 5.

<sup>15</sup> *Id.* at 5-6.

<sup>16</sup> CAISO Answer at 1 & n.2 (referencing Docket No. ER23-1533-000).

<sup>17</sup> CAISO 2022 Summer Market Performance Report, <http://www.caiso.com/Documents/SummerMarketPerformanceReportforSeptember2022.pdf>.

<sup>18</sup> CAISO Answer at 2-3.

storage resources that receive exceptional dispatches to hold their state of charge, and the MSOC requirement decreases the need to exceptionally dispatch storage resources. CAISO concludes that the issue raised by MCE is immaterial to whether CAISO's proposed Tariff revisions are just and reasonable and not unduly discriminatory, as the MSOC requirement reduces the need to issue exceptional dispatches to storage resources.<sup>19</sup>

13. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2022), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We accept CAISO's answer because it has provided information that assisted us in our decision-making process.

14. We accept CAISO's proposed Tariff revision to extend the MSOC requirement for resource adequacy storage resources until the earlier of (a) September 30, 2023, or (b) the implementation of CAISO's planned dispatch enhancements, effective May 28, 2023, as requested. We find CAISO's proposal to extend the MSOC requirement to be just and reasonable and not unduly discriminatory or preferential. We continue to find that CAISO's proposal represents a reasonable measure that will allow CAISO, under specified circumstances, to ensure that resource adequacy energy storage resources have sufficient charge to support their day-ahead market awards on days when tight supply conditions are expected. We also find that a limited three-month extension of the MSOC requirement will allow CAISO to ensure operational reliability through the summer as it continues to develop, test, and implement the software for its energy storage enhancements.

15. While we acknowledge MCE's concerns regarding the impact of exceptional dispatch on resource operations and compensation, we find MCE's concerns about the MSOC requirement imposing costs in the event of certain exceptional dispatches to be speculative. We agree with CAISO that the scenario described by MCE would be unlikely, as it involves CAISO dispatching an energy storage resource to discharge prior to peak conditions. We also note the evidence from CAISO's 2022 Summer Market Performance Report, which shows that CAISO has generally used its exceptional dispatch authority to force resources to charge or preserve their state of charge, rather than to discharge. We further find MCE's request to address lost opportunity costs associated with exceptional dispatches to hold a state of charge to be outside the scope of

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<sup>19</sup> *Id.* at 1-5.

this proceeding, which simply extends for a limited period of time the existing MSOC requirement.

By direction of the Commission.

Debbie-Anne A. Reese,  
Deputy Secretary.