

181 FERC ¶ 61,067  
FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, DC 20426

October 24, 2022

In Reply Refer To:  
California Independent System  
Operator Corporation  
Docket No. ER22-2700-000

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

Attention: Sarah E. Kozal

Dear Ms. Kozal:

1. On August 22, 2022, the California Independent System Operator Corporation (CAISO) submitted, pursuant to section 205 of the Federal Power Act,<sup>1</sup> and part 35 of the Commission's regulations,<sup>2</sup> revisions to its Open Access Transmission Tariff (Tariff) to recognize the operational limits imposed by the maximum number of daily starts for discrete-dispatch Reliability Demand Response Resources (RDRRs) and to allow discrete-dispatch RDRRs to register up to 100 megawatts (MW) in size or larger, if they meet certain criteria. As discussed below, we accept the proposed Tariff revisions, effective as of the actual implementation date, as requested, subject to CAISO notifying the Commission of the actual effective date of the Tariff revisions within five business days of their implementation.

2. RDRRs are demand response resources that curtail load when called during significant transmission or system emergency events.<sup>3</sup> Currently, CAISO's Tariff provides utilities the option to restrict CAISO's RDRR dispatches to the resource's full

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<sup>1</sup> 16 U.S.C. § 824d.

<sup>2</sup> 18 C.F.R. § 35.13 (2021).

<sup>3</sup> CAISO, CAISO eTariff, § 34.7 (General Dispatch Principles) (10.0.0), § 34.7(13).

load reduction, known as the “discrete dispatch” option.<sup>4</sup> CAISO set a registration cap of 50 MW on resources that elect the discrete dispatch option to limit the safety and reliability impacts of these block resources.<sup>5</sup> Unlike conventional demand response resources, CAISO explains, RDRRs often are not capable of granular dispatch due to physical limitations, or may operate under a firm service level agreement under their utility. As such, CAISO currently requires RDRRs to register a minimum load reduction of zero.<sup>6</sup>

3. CAISO asserts that, because the minimum load reduction is currently set at zero, the RDRR can be committed as a zero-cost resource, resulting in dispatch instructions that toggle between the minimum and maximum load reduction values multiple times under a single start-up instruction. However, CAISO explains that utilities view any dispatch at zero as a shutdown and any subsequent dispatch as an additional, new load reduction event. CAISO asserts that too many dispatches from zero to another value may then exceed the maximum number of load reduction events allowed under the utility’s program.<sup>7</sup> According to CAISO, because many utility programs only allow RDRRs one, four-hour dispatch per day, CAISO has manually dispatched discrete RDRRs in emergency conditions, rather than through the market.

4. CAISO states that it aims to recognize RDRRs’ actual operational capabilities and the underlying utility programs to enable CAISO to dispatch RDRRs through the market. To accomplish this, CAISO states that its proposal (1) ensures that the market does not inadvertently create infeasible dispatches based on a misleading minimum load reduction

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<sup>4</sup> *Id.* § 30.6.2 (Bidding and Scheduling of RDRRs) (11.0.0), § 30.6.2.1.2.

<sup>5</sup> *Id.* § 4.13.5 (Characteristics of PDRs and RDRRs) (1.0.0), § 4.13.5.2.2.

<sup>6</sup> *Id.* § 30.6.2 (Bidding and Scheduling of RDRRs) (11.0.0), § 30.6.2.1.2.

<sup>7</sup> CAISO provides an example of a discrete-dispatch RDRR that submits a bid of 50 MW. The real-time market may dispatch the resource to 50 MW of load reduction in one market interval, 0 MW of load reduction in the next market interval, and then back to 50 MW of load reduction in the third market interval. CAISO states that its optimization sees these schedules as a single dispatch, with the RDRR ramping up, then down, then back up. However, CAISO explains, the RDRR operator and the utility see any dispatch to 0 MW as the end of a dispatch and the “ramp” back to 50 MW as a new dispatch that may exceed how many times the RDRR may start during an operating day due to its physical limitations or the utility’s rules. Transmittal at 7.

of zero, and (2) increases the maximum allowable size of discrete-dispatch RDRRs from 50 MW to 100 MW.<sup>8</sup>

5. First, to prevent infeasible dispatches and respect the dispatch limitations of discrete-dispatch RDRRs, CAISO proposes to model the minimum generation output level (Pmin) of a discrete-dispatch RDRR at just below the RDRR's upper economic limit (i.e., the maximum capacity limit in its bid).<sup>9</sup> CAISO states that it will administratively set this value automatically through existing PMin-rerate functionality in the market optimization, and it will not require additional action on behalf of the market participant. Further, to ensure that an RDRR does not appear "free" for dispatch, CAISO proposes to add the value of the RDRR's bid price multiplied by its upper economic limit to the existing minimum load cost of \$0.<sup>10</sup> CAISO states that this will enable the market to commit discrete-dispatch RDRRs like a generator with a non-zero PMin. CAISO asserts that the proposed revisions will allow it to implement software upgrades on an expedited basis by leveraging existing market functionalities and will help CAISO preserve reliability in an emergency through ensuring feasible market dispatches of RDRRs.

6. Second, CAISO proposes to increase the maximum allowable size of discrete-dispatch RDRRs from 50 MW to 100 MW.<sup>11</sup> CAISO asserts that this change will allow demand response providers to reflect the actual size of their RDRRs in the real-time market without having to use multiple resource IDs.<sup>12</sup> Although CAISO believes that it can reliably dispatch larger discrete-dispatch RDRRs, CAISO asserts that a limit on the size of discrete-dispatch RDRRs remains appropriate. CAISO explains that a size limit prevents operational challenges that may occur when the load underlying a discrete-dispatch RDRR comes online after a demand response dispatch has ended. When an RDRR dispatch ends, CAISO may still be in emergency conditions, and the sudden return of a load may cause or exacerbate reliability issues.<sup>13</sup>

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<sup>8</sup> CAISO, CAISO eTariff, § 4.13.5 (Characteristics of PDRs and RDRRs) (2.0.0), § 4.13.5.2.2; *id.* § 30.6.2 (Bidding and Scheduling of RDRRs) (12.0.0), § 30.6.2.1.2.

<sup>9</sup> Transmittal at 7.

<sup>10</sup> *Id.* at 8-9.

<sup>11</sup> CAISO, CAISO eTariff, § 4.13.5 (Characteristics of PDRs and RDRRs) (2.0.0), § 4.13.5.2.2.

<sup>12</sup> Transmittal at 9.

<sup>13</sup> *Id.* at 4.

7. However, CAISO proposes a “soft cap” of 100 MW for discrete-dispatch RDRRs where CAISO can still ensure safety and reliability. CAISO states that, when a discrete-dispatch RDRR’s scheduling coordinator seeks to register a resource above 100 MW, the scheduling coordinator must attest that the RDRR: (1) is located at a single site; (2) has an underlying load that cannot be safely or operationally split; and (3) is unable to operate continuously based on the source of the load providing curtailment. CAISO explains that, upon review, and in consideration of the existing market and operating conditions, CAISO will determine if there are material operational impacts to safety and reliability. CAISO will not approve a request above 100 MW if the RDRR is more likely than not to affect a constraint on the system. CAISO asserts that this amendment is just and reasonable because it will result in more accurate modeling of large RDRRs while preserving reliability in emergency conditions.<sup>14</sup>

8. CAISO requests the proposed Tariff revisions to be effective on or after November 1, 2022, but no later than December 1, 2022, to provide sufficient advance notice and time for market participants and CAISO to prepare for implementing these changes. CAISO further requests authorization to inform the Commission of the actual effective date of the Tariff changes through a subsequent filing within five business days following their implementation.<sup>15</sup>

9. Notice of CAISO’s filing was published in the *Federal Register*, 87 Fed. Reg. 52,547 (Aug. 26, 2022), with interventions and protests due on or before September 12, 2022. Timely motions to intervene were filed by City of Santa Clara, California, Pacific Gas and Electric Company, and Northern California Power Agency. On September 12, 2022, CAISO’s Department of Market Monitoring (DMM) and Southern California Edison Company (SoCal Edison) filed timely motions to intervene and comments.

10. DMM states that it supports CAISO’s Tariff revisions, noting that both enhancements will improve the dispatch and reliability of RDRRs by better reflecting their operational capabilities in the market. DMM asserts that allowing RDRRs to reflect a non-zero minimum output and minimum load cost is an important enhancement that will improve the feasibility of dispatches. DMM also argues that CAISO’s proposal will accommodate stakeholder requests to relax size restrictions on these resources while avoiding potential adverse impacts. DMM further explains that CAISO’s proposal to

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<sup>14</sup> Transmittal at 9-10. Specifically, CAISO explains that it will look at the load of the sub-load aggregation point in which the RDRR is located and the proportional size of that resource to evaluate whether there will be impacts. *Id.* at 10.

<sup>15</sup> *Id.* at 11.

increase the maximum allowable size of discrete RDRRs from 50 MW to 100 MW will allow providers to better reflect the actual size of discrete RDRRs in the market.<sup>16</sup>

11. SoCal Edison states that it generally supports CAISO's proposal and believes it is a positive step forward to addressing RDRRs' true operating characteristics and thereby ensuring feasible market dispatch.<sup>17</sup> SoCal Edison notes that recent CAISO emergency conditions highlight the importance of RDRRs and the critical need to ensure they can be dispatched in a way to ensure reliability.<sup>18</sup> While SoCal Edison believes the Commission should accept CAISO's proposal, it asserts that CAISO and stakeholders should continue to explore, in the near-term, solutions to several unaddressed issues. Specifically, SoCal Edison states that it looks forward to continuing to work with CAISO to further refine (1) the practical implication of CAISO's criteria for allowing RDRRs above 100 MW, and (2) solutions to issues occurring when the market is using hard-coded start-up instructions derived from RDRRs' selection of the 15- and 60-minute dispatchable options instead of the RDRRs' start-up time listed in the Master File.<sup>19</sup>

12. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2021), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

13. We accept CAISO's proposed Tariff revisions, effective as of the actual implementation date, as requested, subject to CAISO filing a notice with the Commission within five days after the actual implementation date.<sup>20</sup> We find that the proposed Tariff revisions are just and reasonable.

14. First, we find that CAISO's proposal to model the PMin of a discrete-dispatch RDRR at just below the RDRR's upper economic limit will appropriately reflect the

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<sup>16</sup> DMM Comments at 2-3.

<sup>17</sup> SoCal Edison Comments at 2.

<sup>18</sup> *Id.* at 3.

<sup>19</sup> *Id.* at 3-4. The Master File contains data for resources participating in CAISO markets. The data is used by CAISO market systems for bidding, operation, and settlement.

<sup>20</sup> CAISO anticipates an effective date after November 1, 2022, but no later than December 1, 2022, for these Tariff revisions, and requests that the Commission allow the effective date for these Tariff revisions to be subject to confirmation by CAISO within five business days after the actual effective date. CAISO must submit its subsequent filing to confirm the actual effective date for the Tariff revisions using Type of Filing Code 150 - Report.

operational characteristics of discrete-dispatch RDRRs. By incorporating the dispatch limitations of discrete-dispatch RDRRs into its modeling, CAISO's proposal should improve CAISO's ability to dispatch RDRRs through the market and enhance pricing signals. As the Commission has explained, having accurate information is necessary to help ensure efficient dispatch.<sup>21</sup>

15. Second, we find that CAISO's proposal to increase the size cap of discrete-dispatch RDRRs from 50 MW to 100 MW will enable demand response providers to reflect the actual size of their RDRRs in the real-time market without having to use multiple resource IDs, and therefore will result in more accurate modeling of RDRRs. Further, we find that CAISO's proposal to allow the registration of discrete-dispatch RDRRs that are larger than 100 MW where CAISO determines there will not be adverse reliability impacts strikes a reasonable balance of allowing greater market participation of larger RDRRs and ensuring that reliability is maintained.

16. As to SoCal Edison's comments regarding additional refinements to CAISO's RDRR rules, we encourage CAISO to continue to develop solutions with stakeholders that improve the modeling and dispatch of RDRRs to enhance the participation and availability of these resources.

By direction of the Commission.

Kimberly D. Bose,  
Secretary.

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<sup>21</sup> See *Elec. Storage Participation in Mkts. Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators*, Order No. 841, 162 FERC ¶ 61,127, at P 189 (2018) ("To efficiently dispatch its system, an RTO/ISO must have accurate information about the physical and operational characteristics of the resources participating in its markets.").