

191 FERC ¶ 61,119  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Mark C. Christie, Chairman;  
David Rosner, Lindsay S. See,  
and Judy W. Chang.

California Independent System Operator Corporation

Docket No. ER24-2042-000

ORDER ON COMPLIANCE

(Issued May 15, 2025)

1. On May 16, 2024, California Independent System Operator Corporation (CAISO) submitted proposed revisions to its Open Access Transmission Tariff (Tariff) in compliance with the requirements of Order Nos. 2023 and 2023-A,<sup>1</sup> which amended the Commission's *pro forma* Large Generator Interconnection Procedures (LGIP), *pro forma* Large Generator Interconnection Agreement (LGIA), *pro forma* Small Generator Interconnection Procedures (SGIP), and *pro forma* Small Generator Interconnection Agreement (SGIA).<sup>2</sup> As discussed below, we find that CAISO's filing partially complies with the requirements of Order Nos. 2023 and 2023-A. Accordingly, we accept CAISO's compliance filing in part, effective May 17, 2024, as requested, and direct CAISO to submit a further compliance filing within 60 days of the date of this order.<sup>3</sup>

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<sup>1</sup> *Improvements to Generator Interconnection Procs. & Agreements*, Order No. 2023, 184 FERC ¶ 61,054, *order on reh'g*, 185 FERC ¶ 61,063 (2023), *order on reh'g*, Order No. 2023-A, 186 FERC ¶ 61,199, *errata notice*, 188 FERC ¶ 61,134 (2024).

<sup>2</sup> The *pro forma* LGIP and *pro forma* LGIA establish the terms and conditions under which public utilities that own, control, or operate facilities for transmitting energy in interstate commerce must provide interconnection service to generating facilities larger than 20 MW. The *pro forma* SGIP and *pro forma* SGIA establish the terms and conditions under which public utilities that own, control, or operate facilities for transmitting energy in interstate commerce must provide interconnection service to generating facilities no larger than 20 MW. Order No. 2023, 184 FERC ¶ 61,054 at P 2.

<sup>3</sup> We note that several Tariff provisions submitted as part of this filing (including but not limited to Appendix KK sections 3.1, 3.5.1, 3.5.2, 6.1.2, and 6.7.2.1) have been superseded by the Commission's acceptance of CAISO's Interconnection Process Enhancements (IPE) filing in Docket No. ER24-2671-000, and instead have an effective

## **I. Background**

2. On July 28, 2023, the Commission issued Order No. 2023. Order No. 2023 requires all public utility transmission providers to adopt revised *pro forma* LGIPs, *pro forma* LGIAs, *pro forma* SGIPs, and *pro forma* SGIAs. These revisions ensure that interconnection customers are able to interconnect to the transmission system in a reliable, efficient, transparent, and timely manner, and will prevent undue discrimination.<sup>4</sup> In Order No. 2023, the Commission adopted a comprehensive package of reforms in three general categories: (1) reforms to implement a first-ready, first-served cluster study process; (2) reforms to increase the speed of interconnection queue processing; and (3) reforms to incorporate technological advancements into the interconnection process.

3. To implement a first-ready, first-served cluster study process, Order No. 2023: (1) requires transmission providers to post public interconnection information in an interactive heatmap to provide interconnection customers information before they enter the queue; (2) eliminates individual serial feasibility and system impact studies; (3) creates a cluster study; (4) creates a range of allowable allocations of cluster study costs; (5) requires transmission providers to use a proportional impact method to assign network upgrade costs within a cluster; (6) requires increased financial commitments and readiness requirements from interconnection customers, including increased study deposits, site control, commercial readiness deposits, and an LGIA deposit; (7) requires transmission providers to institute penalties for withdrawn interconnection requests; and (8) creates a transition mechanism for moving to the cluster study process adopted in Order No. 2023 from the existing serial study process.<sup>5</sup>

4. To increase the speed of interconnection queue processing, Order No. 2023: (1) eliminates the reasonable efforts standard for completing interconnection studies and adopts study delay penalties applicable when transmission providers fail to complete interconnection studies by the deadlines in their tariff; and (2) establishes a more detailed

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date of October 1, 2024. *Cal. Indep. Sys. Operator Corp.*, 188 FERC ¶ 61,225 (2024) (CAISO IPE Order). CAISO should correct any resulting Tariff inconsistencies in its further compliance filing.

<sup>4</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1.

<sup>5</sup> *Id.* P 5.

affected system study process in the *pro forma* LGIP, including *pro forma* affected system agreements and uniform modeling standards.<sup>6</sup>

5. To incorporate technological advancements into the interconnection process, Order No. 2023: (1) requires transmission providers to allow more than one generating facility to co-locate on a shared site behind a single point of interconnection and share a single interconnection request; (2) requires transmission providers to evaluate the proposed addition of a generating facility to an existing interconnection request prior to deeming such an addition a material modification; (3) requires transmission providers to allow interconnection customers to access the surplus interconnection service process once the original interconnection customer has an executed LGIA or requests the filing of an unexecuted LGIA; (4) requires transmission providers, at the request of the interconnection customer, to use operating assumptions in interconnection studies that reflect the proposed charging behavior of electric storage resources; (5) requires transmission providers to evaluate an enumerated list of alternative transmission technologies during the study process; (6) requires each interconnection customer requesting to interconnect a non-synchronous generating facility to submit to the transmission provider certain specific models of the generating facility; (7) establishes ride through requirements during abnormal frequency conditions and voltage conditions within the “no trip zone” defined by North American Electric Reliability Corporation Reliability Standard PRC-024-3 or successor mandatory ride through reliability standards; and (8) requires that all newly interconnecting large generating facilities provide frequency and voltage ride through capability consistent with any standards and guidelines that are applied to other generating facilities in the balancing authority area on a comparable basis.<sup>7</sup>

6. In Order No. 2023-A, the Commission granted certain requests for rehearing and clarification. The Commission set aside Order No. 2023 in part, to specify that: (1) where an interconnection customer is in the interconnection queue of a transmission provider that currently uses, or is transitioning to, a cluster study process and the transmission provider proposes on compliance to adopt the new readiness requirements in Order No. 2023 or a variation for its annual cluster study, the interconnection customer must comply with the transmission provider’s new readiness requirements within 60 days of the Commission-approved effective date of the transmission provider’s compliance filing, where such readiness requirements are applicable given the status of the individual interconnection customer in the queue; (2) a network upgrade that is required for multiple interconnection customers in a cluster, not part of an affected system, and may be constructed without affecting day-to-day operations of the

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<sup>6</sup> *Id.* P 6.

<sup>7</sup> *Id.* P 7.

transmission system during its construction, may be considered a stand alone network upgrade if all such interconnection customers mutually agree to exercise the option to build; (3) a transmission provider must complete its determination that an interconnection request is valid by the close of the cluster request window such that only interconnection customers with valid interconnection requests proceed to the customer engagement window; and (4) acceptable forms of security for the commercial readiness deposit and deposits prior to the transitional serial study, the transitional cluster study, the cluster restudy, and the interconnection facilities study should include not only cash or an irrevocable letter of credit, but also surety bonds or other forms of financial security that are reasonably acceptable to the transmission provider.<sup>8</sup>

7. Additionally, in Order No. 2023-A, the Commission granted several clarifications on the following topics: (1) conflicts with ongoing interconnection queue reform efforts; (2) public interconnection information; (3) the cluster study process; (4) allocation of cluster network upgrade costs; (5) shared network upgrades; (6) withdrawal penalties; (7) study delay penalties and the appeal structure; (8) affected systems; (9) revisions to the material modification process to require consideration of generating facility additions; (10) availability of surplus interconnection service; (11) operating assumptions for interconnection studies; (12) consideration of the enumerated alternative transmission technologies in interconnection studies; and (13) ride-through requirements.<sup>9</sup>

## **II. CAISO's Compliance Filing**

8. CAISO states that its proposed Tariff revisions achieve the purposes of Order No. 2023 and address CAISO-specific needs. CAISO asserts that nearly all of its proposed Tariff revisions mirror the Commission's *pro forma* LGIP and *pro forma* LGIA provisions, including the Commission's new prescribed timelines for studies, and that it has removed or revised portions of its Tariff that would conflict with adopting the Commission's mandates.<sup>10</sup>

9. CAISO states that the proposed Tariff revisions are either expressly required under Order No. 2023, are necessary to accommodate the Commission's directives, or are non-substantive clarifying adjustments similar to those previously accepted in compliance filings. CAISO explains that its proposed revisions build upon CAISO's existing interconnection procedures, with significant independent entity variations previously

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<sup>8</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 7.

<sup>9</sup> *Id.* P 8.

<sup>10</sup> CAISO May 16, 2024 Compliance Filing at 1, 9 (Filing).

accepted by the Commission. CAISO further explains that the revisions are designed to be compatible with its existing planning and market rules.<sup>11</sup>

10. CAISO states that its proposed Tariff revisions completely adopt the Commission's directives regarding cluster studies; the elimination of the reasonable efforts standard; penalties for late studies; interconnection information access (heatmaps); restudy triggers and restudies; affected systems; shared upgrades; site control; co-located facilities; grid-enhancing technologies; modeling requirements; and ride-through requirements.<sup>12</sup>

11. CAISO states that it seeks independent entity variations on the following topics: (1) modifying the lengths of the interconnection request and customer engagement windows (without extending their aggregate length); (2) providing a maximum term to await affected system study reports before executing a GIA; (3) maintaining a cluster study process through the interconnection facilities study; (4) maintaining the methodology used for determining cost allocation of specific network upgrade types; and (5) maintaining CAISO's existing procedures for non-refundable deposits for withdrawal penalties. CAISO explains that it believes each of these variations accomplishes the purposes of Order No. 2023 while adjusting some specific prescribed mechanisms for reasons unique to CAISO's needs.<sup>13</sup>

12. CAISO proposes to apply the Tariff revisions beginning with Cluster 15, which had previously been paused.<sup>14</sup> CAISO explains that because the scope of Tariff revisions is significant, it proposes to implement the revisions in a new appendix to the CAISO Tariff, Appendix KK, Resource Interconnection Standards (RIS).<sup>15</sup> According to CAISO, this will allow Cluster 15 and future clusters to review their own set of interconnection procedures without the historic procedures from Appendix DD,

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

<sup>12</sup> *Id.* at 10.

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

<sup>14</sup> *Id.* at 11. *See Cal. Indep. Sys. Operator Corp.*, 184 FERC ¶ 61,069 (2023) (CAISO) (granting CAISO's request to extend the timelines for its Cluster 14 interconnection queue cluster and to pause its Cluster 15 interconnection queue cluster). Cluster 14 included 343 interconnection requests, a 241% increase from CAISO's previous record-high cluster. Cluster 15 included 541 interconnection requests, a 45% increase from Cluster 14. *CAISO*, 184 FERC ¶ 61,069 at P 6 n.40.

<sup>15</sup> CAISO, CAISO eTariff, app. KK (Res. Interconnection Standards (RIS)) (0.0.0) (Proposed app. KK).

Generator Interconnection and Deliverability Allocation Procedures (GIDAP),<sup>16</sup> and will allow interconnection customers under the GIDAP to continue to follow GIDAP procedures.<sup>17</sup> CAISO states that the new RIS procedures are supplemented by other proposed revisions throughout the Tariff, such as revisions to Appendix A (Definitions) and proposed Appendices LL (LGIA for Interconnection Requests Processed under the RIS) and MM (SGIA for Interconnection Requests Processed under the RIS).<sup>18</sup>

13. CAISO requests that the proposed Tariff revisions become effective on May 17, 2024.

### **III. Notice and Responsive Pleadings**

14. Notice of CAISO's compliance filing was published in the *Federal Register*, 89 Fed. Reg. 44969 (May 22, 2024), with interventions and protests due on or before June 6, 2024. The following entities submitted timely motions to intervene: Advanced Energy United; AES Clean Energy Development, LLC; American Clean Power Association; Arevon Energy, Inc.; California Department of Water Resources State Water Project; Calpine Corporation; City of Santa Clara, California; Clearway Energy Group LLC; Cordelio Services LLC; EDF Renewables, Inc.; Imperial Irrigation District; Modesto Irrigation District; Natural Resources Defense Council and Sustainable FERC Project; Pacific Gas and Electric Company; San Diego Gas and Electric Company; Six Cities CA (Six Cities);<sup>19</sup> Solar Energy Industries Association; Southern California Edison Company; Transmission Agency of Northern California; and Vistra Corp. and Dynegy Marketing and Trade, LLC (jointly).

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<sup>16</sup> CAISO, CAISO eTariff, app. DD (Generator Interconnection & Deliverability Allocation Procedure (GIDAP)) (7.0.0).

<sup>17</sup> Filing at 11.

<sup>18</sup> References to CAISO-specific modifications throughout this order refer to CAISO's proposed replacement of certain *pro forma* generic terms, such as replacing "Transmission Provider" with "CAISO", "Transmission Owner" with "Participating Transmission Owner", and "of this LGIP" with "of the RIS."

<sup>19</sup> Six Cities consist of the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California.

15. Timely motions to intervene and comments or protests were filed by: Clean Energy Associations;<sup>20</sup> Northern California Power Agency; and Shell Companies.<sup>21</sup>

16. On June 21, 2024, CAISO filed a motion for leave to answer and answer to the comments and protests.

17. On August 28, 2024, California Wind Energy Association filed a late motion to intervene.

#### **IV. Discussion**

##### **A. Procedural Matters**

18. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2024), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

19. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d), we grant California Wind Energy Association's late-filed motion to intervene given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

20. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2024), 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.

##### **B. Substantive Matters**

21. As discussed below, we find that CAISO's filing partially complies with the requirements of Order Nos. 2023 and 2023-A. Accordingly, we accept CAISO's compliance filing in part, effective May 17, 2024, as requested, and direct CAISO to submit a further compliance filing within 60 days of the date of this order.

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<sup>20</sup> Clean Energy Associations is comprised of Advanced Energy United, The American Clean Power Association, and the Solar Energy Industries Association.

<sup>21</sup> Shell Companies is comprised of Shell Energy North America (US), L.P.; Shell New Energies US, LLC; and Savion, LLC.

## 1. Proposed Variations

22. As discussed further below, CAISO proposes certain variations from the Commission's requirements in Order Nos. 2023 and 2023-A. The Commission explained in Order No. 2023 that such variations would be reviewed under the same standard allowed by Order Nos. 2003, 2006, and 845.<sup>22</sup> In Order No. 2003, when adopting the *pro forma* LGIP and *pro forma* LGIA, the Commission permitted Regional Transmission Organizations/Independent System Operators (RTO/ISO) to seek "independent entity variations" for pricing and non-pricing provisions, and stated that RTOs/ISOs "shall have greater flexibility to customize [their] interconnection procedures and agreement to fit regional needs."<sup>23</sup> The Commission stated that this approach recognizes that an RTO/ISO is less likely to act in an unduly discriminatory manner than a transmission provider that is a market participant.<sup>24</sup> The Commission has granted independent entity variations from interconnection-related rulemakings where the RTO/ISO demonstrates that the proposed variation: (1) is just and reasonable and not unduly discriminatory or preferential; and (2) accomplishes the purposes of the final rule.<sup>25</sup> It is not a sufficient justification to state that a variation conforms to current RTO/ISO practices or to the RTO's/ISO's tariff definitions and terminology.<sup>26</sup> Even if

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<sup>22</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1764 (citing *Standardization of Generator Interconnection Agreements & Procs.*, Order No. 2003, 104 FERC ¶ 61,103, at P 826 (2003), *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220, *order on reh'g*, Order No. 2003-B, 109 FERC ¶ 61,287 (2004), *order on reh'g*, Order No. 2003-C, 111 FERC ¶ 61,401 (2005), *aff'd sub nom. Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007); *Standardization of Small Generator Interconnection Agreements & Procs.*, Order No. 2006, 111 FERC ¶ 61,220, at PP 447, 549, *order on reh'g*, Order No. 2006-A, 113 FERC ¶ 61,195 (2005), *order granting clarification*, Order No. 2006-B, 116 FERC ¶ 61,046 (2006); *see Reform of Generator Interconnection Procs. & Agreements*, Order No. 845, 163 FERC ¶ 61,043, at P 556 (2018), *order on reh'g*, Order No. 845-A, 166 FERC ¶ 61,137, *order on reh'g*, Order No. 845-B, 168 FERC ¶ 61,092 (2019)).

<sup>23</sup> Order No. 2003, 104 FERC ¶ 61,103 at P 826.

<sup>24</sup> *Id.* P 827.

<sup>25</sup> *See, e.g., ISO New England Inc.*, 164 FERC ¶ 61,222, at P 9 (2018) (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 26, 827; *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,247, at P 20 (2016); *Cal. Indep. Sys. Operator Corp.*, 140 FERC ¶ 61,070, at P 44 (2012)).

<sup>26</sup> *See Cal. Indep. Sys. Operator Corp.*, 170 FERC ¶ 61,112, at P 11 (2020); *Sw. Power Pool, Inc.*, 170 FERC ¶ 61,042, at P 14 (2020); *ISO New England Inc.*, 170 FERC



the transmission provider is an RTO/ISO, it must still justify its variations in light of the Commission's *pro forma* LGIP and/or *pro forma* LGIA and/or *pro forma* SGIP and/or *pro forma* SGIA.<sup>27</sup> We evaluate CAISO's proposed variations from the requirements of Order Nos. 2023 and 2023-A accordingly.

## **2. Public Interconnection Information**

23. In Order No. 2023, the Commission adopted section 6.1 (Publicly Posted Interconnection Information)<sup>28</sup> of the *pro forma* LGIP to require transmission providers to maintain and make publicly available an interactive visual representation of available interconnection capacity (commonly known as a "heatmap") as well as a table of relevant interconnection metrics that is produced in response to user-specified input about each prospective generating facility.<sup>29</sup> The table will allow prospective interconnection customers to see certain estimates of a potential generating facility's effect on the transmission provider's transmission system. Specifically, the Commission required transmission providers to post on their public website a heatmap of estimated incremental injection capacity (in megawatts (MW)) available at each point of interconnection to the whole transmission provider's footprint under N-1 conditions, as well as provide a table of results in response to a specific user's input showing the estimated impact of the addition of the proposed project (based on the user-specified MW amount, voltage level, and point of interconnection) for each monitored facility impacted by the proposed project on: (1) the distribution factor; (2) the MW impact (based on the proposed project size and the distribution factor); (3) the percentage impact on the monitored facility (based on the MW values of the proposed project and the monitored facility rating); (4) the percentage of power flow on the monitored facility before the proposed project; and (5) the percentage power flow on the monitored facility after the injection of the proposed project.

24. The Commission required that heatmaps be calculated under N-1 conditions and studied based on the power flow model of the transmission system used in the most recent cluster study or restudy, and with the transfer simulated from each point of interconnection to the whole transmission provider's footprint (to approximate Network

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¶ 61,209, at P 14 (2020); *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,221, at P 18 (2019); *PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,226, at P 15 (2019).

<sup>27</sup> See *PJM Interconnection, L.L.C.*, 108 FERC ¶ 61,025, at P 16 (2004).

<sup>28</sup> We note that the section or article title appears in parentheses following the first usage of that section or article in this order.

<sup>29</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 135; see *pro forma* LGIP § 6.1.

Resource Interconnection Service (NRIS)<sup>30</sup>), and with the incremental capacity at each point of interconnection decremented by the existing and queued generation at that location (based on the existing or requested interconnection service limit of such generation). The Commission required transmission providers to update their heatmaps within 30 calendars days after the completion of each cluster study and cluster restudy. Further, the Commission clarified that transmission providers are not required to make their heatmaps available until after their transition periods.<sup>31</sup>

**a. CAISO's Compliance Filing**

25. CAISO proposes language in section 3.6 of its RIS to incorporate with minor modifications the Commission's *pro forma* LGIP revisions related to public interconnection information adopted in Order Nos. 2023 and 2023-A.<sup>32</sup> Specifically, CAISO proposes to adopt new section 6.1 (Publicly Posted Interconnection Information) of the *pro forma* LGIP, to replace the generic term "Transmission Provider" with "CAISO," and to provide that CAISO will post this required information on the CAISO website. CAISO also proposes to remove any reference to NRIS which, as CAISO explains, it does not offer.<sup>33</sup>

**b. Commission Determination**

26. We find that CAISO's proposed language related to public interconnection information complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission's *pro forma* LGIP provisions with only minor CAISO-specific modifications.

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<sup>30</sup> The *pro forma* LGIP defines NRIS service as "an Interconnection Service that allows the Interconnection Customer to integrate its Large Generating Facility with the Transmission Provider's Transmission System (1) in a manner comparable to that in which the Transmission Provider integrates its generating facilities to serve native load customers; or (2) in an RTO or ISO with market-based congestion management, in the same manner as Network Resources. Network Resource Interconnection Service in and of itself does not convey transmission service." *Pro forma* LGIP § 1.

<sup>31</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 141.

<sup>32</sup> CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.6.

<sup>33</sup> Filing at 12, n.48.

### 3. Cluster Study Process

27. In Order No. 2023, the Commission revised the *pro forma* LGIP and *pro forma* LGIA to require transmission providers to study interconnection requests in clusters. The Commission added several new, and revised several existing, defined terms to facilitate this change.<sup>34</sup>

28. The Commission adopted section 3.1.2 (Submission) of the *pro forma* LGIP to require an interconnection customer to select a definitive point of interconnection when executing the cluster study agreement.<sup>35</sup> The Commission adopted section 3.4.1 (Cluster Request Window), section 3.4.4 (Deficiencies in Interconnection Request), and section 3.4.5 (Customer Engagement Window) of the *pro forma* LGIP to provide a process for interconnection customers to submit a cluster study interconnection request.<sup>36</sup> The Commission adopted section 3.4.6 (Cluster Study Scoping Meetings) of the *pro forma* LGIP to require transmission providers to hold a scoping meeting with interconnection customers in the cluster.<sup>37</sup> The Commission revised section 3.5.2 (Requirement to Post Interconnection Study Metrics) of the *pro forma* LGIP to require transmission providers to post metrics for cluster study and restudy processing time.<sup>38</sup> Additionally, the Commission required the transmission provider to include the number of calendar days after the conclusion of the transition process that the initial cluster request window will open, as well as the month and date of the opening of the annual cluster request window, in *pro forma* LGIP section 3.4.1.

29. The Commission adopted several revisions to the *pro forma* LGIP related to the process by which an interconnection customer can make an interconnection request. The Commission revised section 4.1 (Queue Position) of the *pro forma* LGIP to provide that all interconnection requests within a cluster be considered equally queued and accordingly modified the definition of “queue position.”<sup>39</sup> The Commission renamed and revised section 4.2 (General Study Process) of the *pro forma* LGIP to require

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<sup>34</sup> Order No. 2023, 184 FERC ¶ 61,054; *see pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.

<sup>35</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 200; *see pro forma* LGIP § 3.1.2.

<sup>36</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 223; *see pro forma* LGIP §§ 3.4.1, 3.4.4, 3.4.5.

<sup>37</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 245; *see pro forma* LGIP § 3.4.6.

<sup>38</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 259; *see pro forma* LGIP § 3.5.2.

<sup>39</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 277, 283; *see pro forma* LGIP § 4.1.

transmission providers to perform interconnection studies within the cluster study process.<sup>40</sup> The Commission revised section 4.4 (Modifications) of the *pro forma* LGIP to provide that moving a point of interconnection shall result in the loss of a queue position if it is deemed a material modification by the transmission provider.<sup>41</sup> The Commission also revised section 4.4.1 of the *pro forma* LGIP to incorporate the material modification process as part of the cluster study process.<sup>42</sup> The Commission revised section 4.4.5 of the *pro forma* LGIP to require that an interconnection customer receive an extension of fewer than three cumulative years of the generating facility's commercial operation date without requiring it to request such an extension from the transmission provider.<sup>43</sup>

30. The Commission adopted revisions to the *pro forma* LGIP to implement several cluster study provisions. The Commission revised section 7 (Cluster Study) of the *pro forma* LGIP to set out the requirements and scope of the cluster study agreement, as well as the cluster study and restudy procedures.<sup>44</sup> The Commission revised *pro forma* LGIP section 7.1 (Cluster Study Agreement) to provide that the transmission provider must tender to each interconnection customer that submitted a valid interconnection request a cluster study agreement no later than five business days after the close of the cluster request window.<sup>45</sup> The Commission revised *pro forma* LGIP section 7.2 (Execution of Cluster Study Agreement) to provide that, if the interconnection customer does not provide technical data when it delivers the cluster study agreement, the transmission provider must notify the interconnection customer of the deficiency within five business days, and the interconnection customer must cure the deficiency within 10 business days.<sup>46</sup> The Commission modified *pro forma* LGIP section 7.3 (Scope of Cluster Study Agreement) to provide that the stability analysis, power flow analysis, and short circuit analysis will be conducted on a clustered basis.<sup>47</sup>

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<sup>40</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 278; *see pro forma* LGIP § 4.2.

<sup>41</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 283; *see pro forma* LGIP § 4.4.

<sup>42</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 285; *see pro forma* LGIP § 4.4.1.

<sup>43</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 293; *see pro forma* LGIP § 4.4.5.

<sup>44</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see pro forma* LGIP § 7.

<sup>45</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see pro forma* LGIP § 7.1.

<sup>46</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see pro forma* LGIP § 7.2.

<sup>47</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see pro forma* LGIP § 7.3.

31. The Commission also modified *pro forma* LGIP section 7.4 (Cluster Study Procedures) to provide that the transmission provider shall complete the cluster study within 150 calendar days, using subgroups if it chooses. Within 10 business days of simultaneously furnishing a cluster study report and draft facilities study agreement to each interconnection customer and posting such report on its Open Access Same-Time Information System (OASIS), the transmission provider shall convene an open meeting to discuss the study results.<sup>48</sup> The Commission revised *pro forma* LGIP section 7.5 (Cluster Study Restudies) to require that the interconnection customer must provide, within 20 calendar days after the cluster study report meeting, a study deposit, demonstration of site control, and a commercial readiness deposit. The Commission also required the transmission provider to complete any cluster restudy within 150 calendar days.<sup>49</sup>

32. The Commission revised section 8.5 (Restudy) of the *pro forma* LGIP to make clear that restudies can be triggered by the withdrawal or modification by a higher- or equally-queued interconnection request.<sup>50</sup> The Commission revised sections 11.1 (Tender) and 11.3 (Execution and Filing) of the *pro forma* LGIP regarding the tendering, execution, and filing of the LGIA to incorporate the site control demonstrations and LGIA deposit requirements of Order No. 2023.<sup>51</sup>

33. The Commission also revised Appendix 2 (formerly Appendix 3) (Cluster Study Agreement) from the *pro forma* interconnection system impact study agreement to the new *pro forma* cluster study agreement.<sup>52</sup>

34. In Order No. 2023-A, the Commission modified the *pro forma* LGIP and *pro forma* LGIA definitions of “stand alone network upgrades” and *pro forma* LGIA article 5.1.3 (Option to Build) to allow an interconnection customer to exercise the option to build whether the stand alone network upgrade is attributable to a single interconnection customer, or multiple interconnection customers in a single cluster study that agree to exercise this option.<sup>53</sup>

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<sup>48</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see pro forma* LGIP § 7.4.

<sup>49</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see pro forma* LGIP § 7.5.

<sup>50</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 335; *see pro forma* LGIP § 8.5.

<sup>51</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 344; *see pro forma* LGIP §§ 11.1, 11.3.

<sup>52</sup> *See pro forma* LGIP, app. 2.

<sup>53</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at PP 141-143; *see pro forma* LGIP § 1;

35. The Commission also modified *pro forma* LGIP section 3.4.5 to clarify that any interconnection request for which the interconnection customer has not executed a cluster study agreement by the end of the customer engagement window will be deemed withdrawn from the interconnection queue.<sup>54</sup> The Commission also modified *pro forma* LGIP section 3.4.4 to clarify that all items in *pro forma* LGIP section 3.4.2 (Initiating an Interconnection Request) must be received during the cluster request window and, if they are not, the interconnection request will be deemed withdrawn.<sup>55</sup>

36. The Commission modified *pro forma* LGIP sections 7.3 and 8.1 (Interconnection Facilities Study Agreement) to remove the requirement for the transmission provider to tender an interconnection facilities study agreement simultaneously with the issuance of a cluster study (or restudy) report and instead add a requirement for the transmission provider to tender the interconnection facilities agreement within five business days after the transmission provider notifies the interconnection customers that no further restudies are required.<sup>56</sup>

37. The Commission modified sections 3.4.2, 5.1.1.1 (Transitional Serial Study), 5.1.1.2 (Transitional Cluster Study), 7.5, and 8.1 of the *pro forma* LGIP to reflect that acceptable forms of security for the commercial readiness deposit and deposits prior to the transitional serial study, the transitional cluster study, the cluster restudy, and the interconnection facilities study should include not only cash or an irrevocable letter of credit, but also surety bonds or other forms of financial security that are reasonably acceptable to the transmission provider.<sup>57</sup>

38. Finally, the Commission revised *pro forma* LGIP sections 3.4.6, 3.5.2.4 (Interconnection Service Requests Withdrawn from Interconnection Queue), and 7.5, as well as the *pro forma* LGIP definition of “interconnection study,” to remove inadvertent errors and add minor clarifying edits.<sup>58</sup>

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*see also pro forma* LGIA arts. 1, 5.1.3.

<sup>54</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 159; *see pro forma* LGIP § 3.4.5.

<sup>55</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 161; *see pro forma* LGIP § 3.4.4.

<sup>56</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 163; *see pro forma* LGIP §§ 7.3, 8.1.

<sup>57</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 185; *see pro forma* LGIP §§ 3.4.2, 5.1.1.1, 5.1.1.2, 7.5, 8.1.

<sup>58</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 167; *see pro forma* LGIP §§ 1,

**a. CAISO's Compliance Filing**

**i. Overview**

39. CAISO explains that it currently uses a cluster study interconnection process to identify the interconnection facilities and network upgrades necessary to integrate a new resource seeking interconnection to the transmission system, to estimate the costs of those upgrades, and to allocate those costs among interconnection customers sharing upgrades. CAISO further explains that the cluster study methodology layers the new cluster of generation upon all existing generation and previous interconnection requests as well as network upgrades approved through CAISO's transmission planning process. CAISO adds that its pre-Order No. 2023 interconnection study process consists of Phase I and Phase II interconnection studies, with annual reassessments that account for changes in the interconnection queue.<sup>59</sup>

40. CAISO asserts that its interconnection study process is unique among RTOs/ISOs in (1) identifying all contingent facilities that could affect an interconnection customer's costs or timing to interconnect, (2) providing cost estimates for these facilities, and (3) creating binding cost caps based on those estimates. Furthermore, CAISO states that under the CAISO Tariff, interconnection customers do not pay for network upgrades but instead finance them and are reimbursed by the applicable Participating Transmission Owner.<sup>60</sup>

41. CAISO states that its current cluster study process is designed to take approximately two years. After the interconnection customer receives its Phase II interconnection study, it negotiates and executes a generator interconnection agreement (GIA) with CAISO and the interconnecting transmission owner.<sup>61</sup>

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3.4.6, 3.5.2.4, 7.5.

<sup>59</sup> Filing at 4.

<sup>60</sup> *Id.* at 4-5; *see also* CAISO, CAISO eTariff, app. A (Definitions), Participating TO or Participating Transmission Owner (PTO) (0.0.0) (defining the term as, "A party to the Transmission Control Agreement whose application under Section 2.2 of the Transmission Control Agreement has been accepted and who has placed its transmission assets and Entitlements under the CAISO's Operational Control in accordance with the Transmission Control Agreement. A Participating TO may be an Original Participating TO or a New Participating TO.") (Proposed app. A).

<sup>61</sup> Filing at 5-6.





42. CAISO notes that the *pro forma* LGIP revises the scope of the interconnection facilities study to specify that the study will be performed on a non-clustered basis.<sup>62</sup> CAISO argues that it is not possible for it to adopt the design of the interconnection facilities study on a serial basis. CAISO states that even before Cluster 14, the volume of its interconnection queue was too high to conduct interconnection facilities studies serially.<sup>63</sup> CAISO contends that too many interconnection customers share network upgrades and interconnection facilities to abandon the clustered approach prior to the facilities study. CAISO therefore proposes an independent entity variation to continue to conduct the interconnection facilities study on a clustered basis and to continue to provide the interconnection customer with its individual results. CAISO states that because the interconnection facilities study in the *pro forma* LGIP contemplates a 90- or 180-day study based on cost accuracy, CAISO proposes to conduct the study in 120 days, which is less than the average of these two.<sup>64</sup>

43. CAISO proposes language in Appendix A (Definitions), and sections 3.1, 3.5, 3.5.1.4, 3.5.2, 3.6.1, 3.6.1.1, 3.6.1.2, 3.6.1.4, 5, 6.1.2, 6.1.3, 6.2, 6.7.2.1, 6.7.2.2, 7.4, 7.4.1, 8.1.1, 8.6, 13.1.1, and 13 of its proposed RIS, as well as articles 1 and 5.1.3 of its proposed Appendix LL (LGIA for Interconnection Requests Processed Under the RIS) of its Tariff, to incorporate with modification the cluster study process framework adopted in Order Nos. 2023 and 2023-A.<sup>65</sup> With these modifications, CAISO proposes to

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<sup>62</sup> *Id.* at 19-20. *See also* Order No. 2023, 184 FERC ¶ 61,054; *pro forma* LGIP § 8 (Interconnection Facilities Study), § 8.2 (providing that the Interconnection Facilities Study will be specific to each Interconnection Request and performed on an individual, i.e., non-clustered, basis).

<sup>63</sup> Filing at 20. Cluster 14 was the last cluster study completed before CAISO's Order No. 2023 proposed cluster study process. Cluster 14 consisted of 204 interconnection customers with 65,506 MW of capacity, which is 125% of the CAISO's historic peak demand. *Id.* at 2.

<sup>64</sup> *Id.* at 20.

<sup>65</sup> CAISO, CAISO eTariff, Proposed app. A, (Cluster Restudy) (0.0.0); *id.* (Cluster Restudy Report.) (0.0.0); *id.* (Cluster Study Agreement) (0.0.0); *id.* (Cluster Study Process) (0.0.0); *id.* (Cluster Study Report Meeting) (0.0.0); *id.* (Customer Engagement Window) (0.0.0); *id.* (Interconnection Facilities Study) (2.0.0); *id.* (Interconnection Agreement) (1.0.0); *id.* (Interconnection Facilities Study Report.) (0.0.0); *id.* (Interconnection Request) (2.0.0); *id.* (Interconnection Study) (3.0.0); *id.* (Material Modification) (1.0.0); *id.* (Queue Position) (1.0.0); *id.* (Scoping Meeting) (1.0.0); *id.* Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.1, 3.5.1, 3.5.1.4, 3.5.2, 3.5.2.2, 3.6.1.1, 3.6.1.2, 3.6.1.4; *id.* § 5 (Fast Track Process) (0.0.0); *id.* § 6 (Cluster Study Process) (0.0.0), §§ 6.1.2, 6.1.3, 6.2, 6.6, 6.7.2; *id.* § 7 (Ann. Reassessment, Cluster

maintain a cluster study process that will continue on through the interconnection facilities study, instead of the Order No. 2023 cluster study and non-clustered facilities study.<sup>66</sup>

## ii. Timeline

44. CAISO proposes to adopt the Commission's prescribed study timelines. CAISO states that this requires substantial revision to the scope of its interconnection studies to conform to the *pro forma* LGIP.<sup>67</sup> CAISO explains that it will discontinue its Phase I and Phase II interconnection studies and adopt the cluster study and interconnection facilities study from the *pro forma* LGIP.

45. CAISO proposes that beginning in 2026, the initial cluster application window for interconnection requests will open annually on October 1 and close on October 15.<sup>68</sup> CAISO proposes to review each interconnection request and notify the interconnection customer of whether its interconnection request is complete or contains omissions within five business days of submission.<sup>69</sup> Any interconnection customer that has not submitted a complete interconnection request by the end of the cluster application window will be

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Restudy, & Activities in Preparation for the Interconnection Facilities Study) (0.0.0), §§ 7.4, 7.4.1; *id.* § 8 (Interconnection Facilities Study & TP Deliverability Allocation Processes) (0.0.0), §§ 8.1, 8.6; *id.* § 13 (Generation Interconnection Agreement (GIA)) (0.0.0), §§ 13.1, 13.3; *id.* app. 3 (Cluster Study Agreement for Queue Clusters) (0.0.0); *id.* Proposed app. LL, art. 1 (Definitions) (0.0.0), Interconnection Facilities Study Report, Interconnection Request, Interconnection Study, Material Modification, Scoping Meeting, Stand Alone Network Upgrades (Proposed app. LL); *id.* art. 5 (Interconnection Facilities Engineering, Procurement, & Construction) (0.0.0), § 5.1.3.

<sup>66</sup> See Order No. 2023, 184 FERC ¶ 61,054; *pro forma* LGIP § 8 (Interconnection Facilities Study), § 8.2 (providing that the Interconnection Facilities Study will be specific to each Interconnection Request and performed on an individual, i.e., non-clustered, basis).

<sup>67</sup> Filing at 20.

<sup>68</sup> CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.3.1.

<sup>69</sup> *Id.* § 3.5.1.

unable to proceed and their interconnection request will be deemed incomplete with no opportunity to cure the deficiency.<sup>70</sup>

46. CAISO proposes that, along with the Participating Transmission Owner, it will notify the interconnection customer of whether its interconnection request is valid or contains deficiencies within 10 business days of October 15 or when the interconnection request is deemed complete, whichever is later.<sup>71</sup> If an interconnection request has deficiencies, CAISO proposes to notify and explain the deficiencies to the interconnection customer, who will be able to provide CAISO with the correct information needed to constitute a valid request.<sup>72</sup>

47. CAISO will notify the interconnection customer within five business days of receipt of the corrected information whether the interconnection request is valid. If the interconnection request continues to be deficient, CAISO proposes to include the reasons for such failure in its notification to the interconnection customer. If an interconnection customer is notified that its interconnection request is not deemed valid (e.g., due to modeling errors, inaccurate data, or unusable files), the interconnection customer must cure all deficiencies within 10 business days after receipt of such notice but no later than the close of the customer engagement window.<sup>73</sup> Interconnection requests with deficiencies after that date will be deemed invalid and will not be included in an Interconnection Study Cycle or otherwise studied.<sup>74</sup>

48. CAISO states that any interconnection customer that has not submitted a complete interconnection request by October 15 will be deemed incomplete with no opportunity to cure or otherwise be included in that year's queue cluster.<sup>75</sup> CAISO proposes that upon the close of each cluster application window, the customer engagement window will open for 90 calendar days. CAISO further proposes that during the customer engagement window, CAISO will hold a scoping meeting with all interested interconnection customers, and upon written consent of all interconnection customers within the cluster, CAISO may shorten the customer engagement window and begin the cluster study. CAISO proposes that within 10 business days of the opening of the customer engagement

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<sup>70</sup> *Id.*

<sup>71</sup> *Id.* § 3.5.2.1.

<sup>72</sup> *Id.* § 3.5.2.2.

<sup>73</sup> *Id.* § 3.5.2.

<sup>74</sup> *Id.* § 3.5.2.2.

<sup>75</sup> *Id.* § 3.5.1.

window, CAISO will post on its website a list of interconnection requests for that cluster.<sup>76</sup>

49. CAISO proposes that, at the end of the customer engagement window, all interconnection requests deemed valid and that have executed a cluster study agreement will be included in the cluster study to be initiated by CAISO.<sup>77</sup> CAISO will complete and issue the cluster study report to interconnection customers within 150 days after the commencement of the cluster study.<sup>78</sup> Within 10 business days of simultaneously furnishing a cluster study report to each interconnection customer within the cluster and posting such report on the CAISO website, CAISO will convene a cluster study report meeting.<sup>79</sup>

50. Within 20 days after the cluster study report meeting, the interconnection customer must provide demonstration of continued Site Control and an additional deposit that brings the total Commercial Readiness Deposit submitted to the Participating Transmission Owner to five percent of the interconnection customer's network upgrade cost assignment identified in the cluster study.<sup>80</sup> If one or more interconnection customers withdraw(s) or is/are deemed withdrawn from the cluster, CAISO will notify interconnection customers in the cluster and post on the CAISO website that a cluster restudy is required, within 30 days after the cluster study report meeting.<sup>81</sup>

51. CAISO proposes that within five business days following CAISO's notification to each interconnection customer within the cluster that no further cluster restudy is required, CAISO will provide the interconnection customer with an interconnection facilities study agreement.<sup>82</sup> CAISO further proposes that within five business days following the cluster study report meeting or cluster restudy report meeting, if applicable, CAISO will provide a non-binding good faith estimate to the interconnection customer

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<sup>76</sup> *Id.* § 3.5.2.

<sup>77</sup> *Id.*

<sup>78</sup> *See id.* § 6 (Cluster Study Process) (0.0.0), § 6.6.

<sup>79</sup> *Id.* § 6.7.

<sup>80</sup> *See id.* § 7 (Annual Reassessment, Cluster Restudy, & Activities in Preparation for the Interconnection Facilities Study) (0.0.0), § 7.4.1.

<sup>81</sup> *Id.*

<sup>82</sup> CAISO, CAISO eTariff, Proposed app. KK, § 8 (Interconnection Facilities Study & TP Deliverability Allocation Processes) (0.0.0), § 8.1.1.

of the cost and timeframe for completing the interconnection facilities study. The interconnection customer will execute the interconnection facilities study agreement and, within 30 days after receiving, deliver it to CAISO.

52. CAISO and the Participating Transmission Owner will complete the clustered interconnection facilities study and issue a draft interconnection facilities study report to the interconnection customer within 120 days after receipt of an executed interconnection facilities study agreement.<sup>83</sup> The interconnection customer may, within 30 days after receipt of the draft interconnection facilities study report, provide written comments to CAISO, which CAISO will include in completing the final interconnection facilities study report. CAISO will issue the final interconnection facilities study report within 15 business days of receiving the interconnection customer's comments or promptly upon receiving the interconnection customer's statement that it will not provide comments.<sup>84</sup> CAISO proposes that within 30 calendar days of providing the final Phase II Interconnection Study report to the interconnection customer, the applicable Participating Transmission Owner(s), CAISO, and the interconnection customer will meet to discuss the results of the Phase II Interconnection Study, including selection of the final Commercial Operation Date.

**iii. Cluster Request Window and Customer Engagement Window**

53. CAISO proposes to adopt most of the Commission's revisions to the *pro forma* LGIP, with two independent entity variations that CAISO explains were previously approved by the Commission.<sup>85</sup> First, CAISO proposes to review interconnection requests using a two-step process. During the first step – the cluster application window – CAISO initially reviews the interconnection requests for completeness to ensure that the interconnection customer submitted all required information. During the second step – the customer engagement window – CAISO and the transmission owner engineering staff review the technical data provided in each interconnection request to ensure the data is sound, and CAISO reviews all site control documentation.<sup>86</sup> Second, CAISO proposes an independent entity variation to continue to use its existing 15-day cluster application

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<sup>83</sup> *Id.* § 8.5.

<sup>84</sup> *Id.*

<sup>85</sup> Filing at 15 (citing *Cal. Indep. Sys. Operator Corp.*, Docket No. ER19-1013-000 (Apr. 1, 2019) (delegated order)).

<sup>86</sup> *Id.*; CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.5.1, 3.5.2.

window<sup>87</sup> along with a 90-day customer engagement window to review interconnection requests, instead of the 45-day cluster request window and 60-day customer engagement window adopted in Order No. 2023.<sup>88</sup> CAISO proposes that interconnection customers will be permitted to remedy deficient interconnection requests until the end of the customer engagement window.<sup>89</sup>

54. CAISO asserts that its independent entity variations from the *pro forma* LGIP meet the intent and goals of Order No. 2023 while accounting for CAISO's size and need to interact with interconnection customers meaningfully to avoid delays in the cluster study. CAISO explains that it requires more time to review and validate the data in the interconnection requests, and that its two-step process functions well and has resulted in significant improvement since it was implemented. CAISO asserts that its interconnection request review and cure period for completeness occurs first because CAISO has found this step to be relatively easy. In contrast, CAISO states that, because reviewing and fixing technical data is a complex process that requires back-and-forth iteration among the interconnection customer, CAISO, and the transmission owner, all three parties have benefitted from more time to review and cure technical errors. CAISO argues that for these reasons, the Commission should accept the proposed Tariff revisions as just, reasonable, and compliant with Order No. 2023.<sup>90</sup>

55. CAISO proposes to move the deadline for customers to select a definitive point of interconnection to the end of the customer engagement window, instead of adopting the Commission's *pro forma* LGIP deadline for customer selections when executing the cluster study agreement because CAISO proposes to maintain its existing process requiring interconnection customers to submit executed cluster study agreements with

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<sup>87</sup> CAISO explains that for consistency, CAISO maintained its Tariff term "Cluster Application Window" in lieu of "Cluster Request Window." Filing at 15 n.61.

<sup>88</sup> *Id.* at 15; CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.3.1, 3.5.2. CAISO notes that the sum of the duration of the cluster application window and customer engagement window is 105 days as is the sum of the 45-day cluster request window and 60-day customer engagement window required by Order No. 2023. Filing at 15.

<sup>89</sup> Filing at 15 n.64 (citing CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0)).

<sup>90</sup> *Id.* at 15-16.

the initial interconnection request.<sup>91</sup> CAISO asserts that this proposal maintains all interconnection customer rights and obligations consistent with the Order No. 2023 timelines, but without the administrative step of submitting another element of an interconnection request (i.e., an executed cluster study agreement) at the end of the customer engagement window, instead of with the original interconnection request.

#### **iv. Cluster Study Commencement**

56. CAISO proposes in its cluster study procedures to: (1) coordinate the cluster study with any affected system, (2) utilize existing studies to the extent practicable, and (3) notify interconnection customers with an explanation and estimated completion date if study will not be completed within the time period with CAISO-specific modifications. CAISO also proposes to complete and issue the cluster study report to interconnection customers within 150 days after the commencement of the cluster study instead of issuing the report within 150 days of the close of the customer engagement window as required by Order No. 2023.<sup>92</sup>

#### **b. Comments, Protests, and Answers**

57. NCPA states that the extreme volume in CAISO's most recent cluster "represents the low bar to submit an interconnection request and the high level of financial opportunity in generation development."<sup>93</sup> NCPA argues that serious reform is needed to clear the queue of projects that will never be built and to select for study the projects that have the greatest chance of being built.<sup>94</sup> NCPA further argues that a functional interconnection process cannot study all proposed projects, simultaneously or otherwise, and hope for useable results. NCPA asserts that CAISO must have the means to winnow the non-functional resource queue by studying the most viable projects that meet requirements mandated by state and local law. NCPA states, therefore, that it supports the Commission's acceptance of this filing as the first step in that necessary process.<sup>95</sup>

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<sup>91</sup> *Id.* at 14 (citing CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.1, 3.5; *id.* § 6 (Cluster Study Process) (0.0.0), § 6.7.2).

<sup>92</sup> CAISO, CAISO eTariff, Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), § 6.6; *see* Order No. 2023, 184 FERC ¶ 61,054 at P 327; *pro forma* LGIP § 7.4.

<sup>93</sup> NCPA Comments at 4.

<sup>94</sup> *Id.* (citing Filing at 8).

<sup>95</sup> *Id.* at 5.

58. Clean Energy Associations are broadly supportive of CAISO's efforts to implement Order No. 2023 and agree that "CAISO cannot proceed with [C]luster 15's extreme volume without the reforms Order No. 2023 requires."<sup>96</sup> Clean Energy Associations urge the Commission to promptly accept most aspects of CAISO's filing, which, if adopted, would retain what they argue are many of the best aspects of CAISO's current interconnection process. Clean Energy Associations add that accepting most aspects of the filing would also implement changes to comply with Order No. 2023 that should help to address the historically high volumes of interconnection requests.<sup>97</sup>

**i. Timeline**

59. Clean Energy Associations request that the Commission carefully evaluate CAISO's proposed independent entity variations regarding the timing of cluster and facilities studies to ensure that CAISO's filing minimizes the time projects must spend in the queue, while retaining CAISO's ability to provide cost certainty.<sup>98</sup>

60. In response, CAISO states that its goal in proposing a variation of the timing of cluster and facilities studies is to retain the ability to minimize the time projects must spend in the queue.<sup>99</sup>

**ii. Cluster Request and Customer Engagement Windows**

61. Shell Companies argue that CAISO's proposed 15-day cluster application window is too short because it allows too little time to cure application deficiencies, especially considering that CAISO is allowed five business days to provide notice to an interconnection customer of a deficiency with its interconnection application. Shell Companies assert that CAISO has neither requested nor provided any justification for why its proposed 15-day cluster application window should be approved as an independent entity variation. Shell Companies assert that if CAISO does not revise its proposal to extend the cluster application window to 45-days, which affords interconnection customers a reasonable period of time to resolve deficiencies in

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<sup>96</sup> Clean Energy Associations Comments at 1 (citing Filing at 2).

<sup>97</sup> *Id.* at 2.

<sup>98</sup> *Id.*

<sup>99</sup> CAISO Answer at 11-12.



an interconnection application, the Commission should reject CAISO's proposed Appendix KK, section 3.3.<sup>100</sup>

62. CAISO disputes Shell Companies' assertions, arguing that its experience over the past several years has shown that the use of the 15- and 90-day timelines has worked well and has resulted in significant improvements in CAISO's processing and review of interconnection requests, and that it is crucial to have sufficient time to review and validate the data in every interconnection request. CAISO further emphasizes that its two-step process is 105 days, the same length as the sum of the timelines contained in Order No. 2023.<sup>101</sup>

### **iii. Cluster Study Commencement**

63. Shell Companies protest CAISO's proposal to complete and issue the cluster study report to interconnection customers within 150 days after the commencement of the cluster study, rather than within 150 days of the close of the customer engagement window.<sup>102</sup> Shell Companies argue that CAISO's proposal could allow a delay to the commencement and completion of a cluster study indefinitely and requests that the Commission direct CAISO to clarify its proposed provision to state specifically that the cluster study commences at the end of the customer engagement window.<sup>103</sup>

64. In its answer, CAISO states that it made a drafting error in its filing. CAISO states that it had intended to follow the Order No. 2023 requirement to complete the cluster study within 150 days of the close of the customer engagement window. CAISO requests that the Commission accept the filing subject to a further compliance filing with revised procedures stating that each cluster study will be completed within 150 days of the close of the customer engagement window.

### **c. Commission Determination**

#### **i. Overview and Timeline**

65. We find that CAISO's proposed revisions in its Tariff Appendix A, and proposed RIS sections 3.1, 3.5, 3.5.1.4, 3.6.1, 3.6.1.1, 3.6.1.2, 3.6.1.4, 5, 6.1.2, 6.1.3, 6.2, 6.6, 6.7.2.1, 6.7.2.2, 7.4, 7.4.1, 8.1.1, 8.6, 13.1.1, and 13, as well as articles 1 and 5.1.3 of its

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<sup>100</sup> Shell Companies Protest at 9-10.

<sup>101</sup> CAISO Answer at 5-9.

<sup>102</sup> Shell Companies Protest at 2-3.

<sup>103</sup> *Id.* at 7.

proposed Appendix LL, LGIA for Interconnection Requests Processed Under the RIS, comply with the requirements of Order Nos. 2023 and 2023-A. CAISO has adjusted its cluster study provisions and timeline to conform to Order Nos. 2023 and 2023-A requirements with regard to scope and schedules by adopting the Commission's *pro forma* LGIP and *pro forma* LGIA with CAISO-specific modifications to reflect CAISO as the transmission provider and the applicable Participating Transmission Owner as transmission owner. We also accept CAISO's proposed independent entity variation to perform the interconnection facilities study on a clustered rather than a serial basis to accommodate the size and overlap of shared network upgrades and interconnection facilities within CAISO's queue as just and reasonable, and not unduly discriminatory or preferential. Consistent with the Order No. 2023 study process, CAISO will continue to provide individual facilities study results to each interconnection customer. Therefore, we find that the proposed variation accomplishes the purposes of Order Nos. 2023 and 2023-A.<sup>104</sup>

66. We also find that CAISO has complied with the Commission's requirement for the transmission provider to include in its LGIP the number of calendar days after the conclusion of the transition process that the initial cluster request window will open, as well as the month and date of the opening of the annual cluster request window.

67. We find, however, that there are two references to the final Phase II Interconnection Study report included in the RIS section 8 Facilities Study provisions that are not consistent with CAISO's proposal to discontinue the Phase I and II studies. Therefore, we direct CAISO to submit, within 60 days of the date of this order, a further compliance filing that either removes the continued references to the final Phase II Interconnection Study report or justifies the references under the independent entity variation standard.<sup>105</sup>

**ii. Cluster Application and Customer Engagement Windows**

68. We accept CAISO's proposed revisions, including its proposed independent entity variations because we find that CAISO's proposal is just and reasonable, not unduly discriminatory or preferential, and accomplishes the purposes of Order Nos. 2023 and

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<sup>104</sup> See Order No. 2023 *pro forma* LGIP § 1 defining cluster study process "to include the following processes, conducted in sequence: the cluster request window; the customer engagement window and scoping meetings therein; the cluster study; any needed cluster restudies; and the interconnection facilities study."

<sup>105</sup> See CAISO, CAISO eTariff, Proposed app. KK, § 8 (Interconnection Facilities Study & TP Deliverability Allocation Processes) (0.0.0), § 8.7; Filing at 21 n.92 (referencing interconnection facilities study results meeting).

2023-A. These revisions ensure that interconnection customers and transmission providers have sufficient time to discuss and comprehensively evaluate whether interconnection requests are fully valid and provide necessary information to avoid delays during the cluster study process.

69. We find that CAISO has shown that its existing two-step cluster application and customer engagement process is just and reasonable and not unduly discriminatory or preferential and is necessary to account for CAISO's overall interconnection process, CAISO's queue size, and meaningful early interaction with interconnection customers to avoid delays in the cluster study process. As CAISO explains, in 2018, the Commission accepted CAISO's proposed two-step process that shortened its cluster application window from 30 to 15 days, finding that moving 15 days from the cluster application window to the validation process would avoid delaying the overall interconnection process timeline and allow all parties more time to review or correct submittals.<sup>106</sup> We find that CAISO's experience with this process has shown that the shortened 15-day cluster application window provides sufficient time for interconnection customers to cure incomplete interconnection requests and that the 90-day customer engagement window provides an appropriate amount of time to review and cure technical errors to ensure the data is sound.<sup>107</sup>

70. We are not persuaded by Shell Companies' argument that CAISO's proposed 15-day cluster application window is too short because it provides too little time for interconnection customers to cure deficiencies. CAISO's proposal requires that an interconnection customer submit a complete interconnection request by the end of the cluster application window, or its request will be deemed incomplete with no opportunity to cure.<sup>108</sup> However, as CAISO explains, an interconnection customer has until the end of the 90-day customer engagement window to fix technical data and cure technical errors in an interconnection request. Thus, the interconnection customer will have more time to cure technical deficiencies in an interconnection request under CAISO's Tariff than the 45-day period provided under the *pro forma* LGIP.<sup>109</sup>

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<sup>106</sup> *Cal. Indep. Sys. Operator Corp.*, 162 FERC ¶ 61,207, at P 14 (2018).

<sup>107</sup> Filing at 15 (stating that the modified two-step process has resulted in significant improvement since implemented).

<sup>108</sup> CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.5.1.

<sup>109</sup> CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.5.1, 3.5.2. CAISO will first determine whether a submitted interconnection request is complete and notify the interconnection customer of whether it contains omissions within five business days of submission. An interconnection request will be

71. Therefore, we find that CAISO's proposed cluster application and customer engagement window provisions for the review and validation of interconnection requests are just, reasonable, not unduly discriminatory or preferential, and accomplish the purposes of Order Nos. 2023 and 2023-A to ensure that interconnection customers are able to interconnect to the transmission system in a reliable, efficient, transparent, and timely manner.

72. Additionally, we note that CAISO's proposed requirement for interconnection customers to select a definitive point of interconnection at the end of the customer engagement window has been superseded by tariff revisions accepted in the CAISO IPE Order requiring interconnection customers to select a definitive point of interconnection no later than 10 days after the close of the cluster application window.<sup>110</sup> As stated in the CAISO IPE Order, we continue to find "CAISO's proposal just and reasonable because it enables CAISO to have a firm cluster of projects with definitive points of interconnection before it begins applying the scoring criteria and tiebreakers, which will eliminate the need for CAISO to re-administer the scoring criteria or tiebreakers for the cluster to accommodate an interconnection customer's late request to change a requested point of interconnection."<sup>111</sup> Additionally we accept CAISO's proposal to maintain its existing Tariff language (as revised by the CAISO IPE filing) as an independent entity variation because the proposed variation is just and reasonable, not unduly discriminatory or preferential, and accomplishes the purposes of Order Nos. 2023 and 2023-A, which acknowledged that changes to the point of interconnection will likely impact the study results of the other interconnection customers in the cluster and could lead to restudies and delays.<sup>112</sup>

### **iii. Cluster Study Commencement**

73. We find that CAISO's proposed RIS section 6.6 Cluster Study Procedures partially complies with the requirements of Order Nos. 2023 and 2023-A. CAISO has adopted the *pro forma* LGIP procedures with only CAISO-specific modifications. However, as CAISO identifies, CAISO's proposal for when to commence counting the duration of the 150-day period within which a cluster study must be completed contains a

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deemed valid if it does not contain deficiencies that would prevent its inclusion in the cluster study. The interconnection customer will provide CAISO the additional requested information needed to constitute a valid request within 10 business days after receipt of such notice but no later than the end of the customer engagement window.

<sup>110</sup> CAISO eTariff, app. KK, § 3.1 (General).

<sup>111</sup> CAISO IPE Order, 188 FERC ¶ 61,225 at P 223.

<sup>112</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 202.

drafting error. CAISO requests, in light of its drafting error, that the Commission permit a further compliance filing with a revision that would follow the Order No. 2023 requirement to complete the cluster study within 150 days of the close of the customer engagement window instead of from the date the cluster study begins. Accordingly, we direct CAISO to submit, within 60 days of the date of this order, a further compliance filing making this correction.

#### **4. Allocation of Cluster Study Costs**

74. In Order No. 2023, the Commission revised section 13.3 (Obligation for Study Costs) of the *pro forma* LGIP to allow each transmission provider to propose its own ratio for allocating the shared costs of cluster studies, provided that between 10% and 50% of study costs must be allocated on a per capita basis, with the remainder (between 50% and 90%) allocated pro rata by MW.<sup>113</sup>

##### **a. CAISO's Compliance Filing**

75. CAISO proposes to incorporate the *pro forma* revisions adopted in Order Nos. 2023 and 2023-A, with CAISO-specific changes, in RIS section 3.5.1.2 (Obligation for Study Costs). In addition, as directed in Order No. 2023, CAISO proposes to include in RIS section 3.5.1.2 a description of how the cost of any clustered interconnection study will be allocated. Specifically, CAISO proposes to allocate 50% of cluster study costs on a per capita basis among interconnection customers in the cluster or cluster area, as applicable, and 50% of cluster study costs on a pro rata basis by MW among interconnection customers in the cluster or cluster area, as applicable.<sup>114</sup>

##### **b. Commission Determination**

76. We find that CAISO's proposed language in RIS section 3.5.1.2 complies with the requirements of Order Nos. 2023 and 2023-A because CAISO has adopted the *pro forma* language on cluster study cost allocation with minor CAISO-specific modifications. We also find that CAISO's proposal to allocate 50% of cluster study costs on a per capita basis among the cluster or cluster area, as applicable, and the remaining 50% of cluster study costs on a pro rata basis by MW among the cluster or cluster area, as applicable, complies with the requirement to allocate between 10% and 50% of study costs on a per capita basis, with the remainder (between 50% and 90%) allocated on a pro rata basis.

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<sup>113</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 416; *see pro forma* LGIP § 13.3.

<sup>114</sup> Filing at 27; CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.5.1.2.

## 5. Allocation of Cluster Network Upgrade Costs

77. In Order No. 2023, the Commission required transmission providers to allocate system network upgrade<sup>115</sup> costs based on a proportional impact method.<sup>116</sup> Specifically, the Commission added *pro forma* LGIP section 4.2.1 (Cost Allocation for Interconnection Facilities and Network Upgrades) to require a transmission provider to: (1) allocate the costs of network upgrades located at substations equally among each generating facility interconnecting to the same substation (i.e., on a per capita basis); and (2) direct the transmission provider on compliance to provide tariff provisions that describe, for each type of system network upgrade that a transmission provider would identify in the cluster study process, how the costs of each system network upgrade type will be allocated among the interconnection customers within the cluster.<sup>117</sup> The Commission added to the *pro forma* LGIP and *pro forma* LGIA definitions for “proportional impact method,” “substation network upgrades,” and “system network upgrades” and modified the existing definition of “stand alone network upgrades.”<sup>118</sup> The Commission required the transmission provider’s revisions on compliance to provide that costs for a discrete network upgrade identified in the cluster study process are allocated to only the interconnection customers in the cluster that are shown through technical analyses to contribute to the need for that discrete network upgrade.<sup>119</sup> The Commission also required transmission providers to directly allocate the costs of interconnection facilities (i.e., both the interconnection customer’s interconnection facilities and transmission provider’s interconnection facilities). The Commission further provided that, if interconnection customers agree to share interconnection facilities, a per capita cost allocation applies, and that interconnection customers may choose a different

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<sup>115</sup> The *pro forma* LGIP defines system network upgrades as “Network Upgrades that are required beyond the substation located at the Point of Interconnection.” *Pro forma* LGIP § 1.

<sup>116</sup> The *pro forma* LGIP defines proportional impact method as “a technical analysis conducted by Transmission Provider to determine the degree to which each generating facility in the cluster study contributes to the need for a specific System Network Upgrade.” *Id.*

<sup>117</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 453, 461; *see pro forma* LGIP § 4.2.1.

<sup>118</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 458, 460; *see pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.

<sup>119</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 461.

cost sharing arrangement upon mutual agreement.<sup>120</sup> Finally, the Commission revised Appendix A (Interconnection Facilities, Network Upgrades and Distribution Upgrades) of the *pro forma* LGIA to include substation network upgrades and system network upgrades.<sup>121</sup>

78. In Order No. 2023-A, the Commission clarified that cost allocation for substation network upgrades is based on the number of interconnection facilities connecting to the substation at the point of interconnection. The transmission provider must first allocate the costs of substation network upgrades on a per capita basis for each interconnection facility connecting to the substation, and then allocate those costs on a per capita basis between each generating facility using the interconnection facility. Accordingly, with this clarification, the Commission revised *pro forma* LGIP section 4.2.1.1.a to specify that substation network upgrade costs shall be allocated first to interconnection facilities interconnecting to the substation at the same voltage level, and then per capita to each generating facility sharing the interconnection facility.<sup>122</sup>

**a. CAISO's Compliance Filing**

79. CAISO proposes language in RIS section 6.3 (Identification of and Cost Allocation for Network Upgrades), as well as to article 1 (Definitions) and Appendix A (Interconnection Facilities, Network Upgrades and Distribution Upgrades) of its *pro forma* LGIA, to incorporate with modification the *pro forma* revisions for allocating the costs of network upgrades and interconnection facilities adopted in Order Nos. 2023 and 2023-A.<sup>123</sup>

**i. Cost Allocation for Specific Network Upgrades**

80. CAISO states that its proposed Tariff provisions related to the methodology used for determining cost allocation for specific network upgrade types align with Order No. 2023, but requests independent entity variations to use different terminology than

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<sup>120</sup> *Id.* P 454.

<sup>121</sup> *Pro forma* LGIA, app. A.

<sup>122</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at PP 177-178; *see pro forma* LGIP § 4.2.1.1.a.

<sup>123</sup> CAISO, CAISO eTariff, Proposed app. A, Stand Alone Network Upgrades (2.0.0); *id.* Interconnection Facilities (1.0.0); *id.* Network Upgrades (1.0.0); *id.* Distribution Upgrades (0.0.0); *id.* Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), § 6.3; *id.* Proposed app. LL, art. 1 (Definitions) (0.0.0), Stand Alone Network Upgrades.

the definitions in the *pro forma* LGIP and *pro forma* LGIA.<sup>124</sup> Specifically, CAISO does not include a definition of “proportional impact method,” “substation network upgrades,” or “system network upgrades.” Although the term “proportional impact method” is not included in CAISO’s Tariff provisions, CAISO proposes for continuity to carry over to the RIS its current cost allocation methodology and terminology for each type of network upgrade, as explained below. In place of “substation network upgrades,” CAISO proposes to continue to use the Tariff’s existing definition of Interconnection Reliability Network Upgrades (IRNU), which, consistent with Order No. 2023’s treatment of Substation Network Upgrades, are those upgrades needed at the point of interconnection, and are allocated on a *per capita* basis.<sup>125</sup> CAISO’s Tariff provides that “interconnection customers assigned IRNUs in their cluster study will be allocated the full cost of the IRNUs in their Maximum Cost Responsibility.”<sup>126</sup> CAISO has adopted the *pro forma* provisions for allocating the cost of interconnection facilities (including shared interconnection facilities), without modification.<sup>127</sup>

81. For “system network upgrades,” CAISO uses its Tariff’s existing definitions of Reliability Network Upgrades (RNUs), General Reliability Network Upgrades (GRNUs),<sup>128</sup> Local Delivery Network Upgrades (LDNUs), and Area Delivery Network Upgrades (ADNUs).<sup>129</sup> CAISO explains that GRNUs, LDNUs, and ADNUs are distinct network

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<sup>124</sup> Filing at 10, 28 (citing CAISO, CAISO eTariff, app. DD, § 6 (Initial Activities & Phase I of the Interconnection Study Process for Queue Clusters) (22.0.0), § 6.3; *id.* Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), § 6.3).

<sup>125</sup> See CAISO, CAISO eTariff, Proposed app. A, Interconnection Reliability Network Upgrade (IRNU) (0.0.0) (“Reliability Network Upgrades at the Point of Interconnection to accomplish the physical interconnection of the Generating Facility to the CAISO Controlled Grid. IRNUs are treated as Reliability Network Upgrades unless otherwise noted.”).

<sup>126</sup> See CAISO, CAISO eTariff, Proposed app. KK, § 6.3.1 (Reliability Network Upgrades (RNUs)) (0.0.0).

<sup>127</sup> See CAISO, CAISO eTariff, Proposed app. KK, § 6.3.3 (Interconnection Facilities) (0.0.0).

<sup>128</sup> RNUs can be GRNUs or IRNUs. CAISO, CAISO eTariff, Proposed app. KK, § 6.2 (Scope and Purpose of Cluster Study) (0.0.0).

<sup>129</sup> See CAISO, CAISO eTariff, Proposed app. A, General Reliability Network Upgrade (GRNU) (0.0.0) (“Reliability Network Upgrades that are not [IRNUs].”); *id.* (Local Delivery Network Upgrade) (0.0.0) (“A transmission upgrade or addition identified by the CAISO in the GIDAP interconnection study process to relieve a Local Deliverability Constraint.”); *id.* Area Delivery Network Upgrade (0.0.0) (“A transmission



upgrade types, related to deliverability and reliability, and that they correlate to the Commission's definition and treatment of System Network Upgrades.

82. CAISO proposes that the costs of network upgrades shall be allocated based on the proportional impact of each individual generating facility in the cluster study on the need for a specific system network upgrade. Proposed RIS section 6.3.1 (Reliability Network Upgrades (RNU)) provides that the cost of all RNUs identified in the cluster study will be estimated in accordance with RIS section 6.4 (Use of Per Unit Costs to Estimate Network Upgrade and [Participating Transmission Owner] Interconnection Facilities Costs), which outlines the use of per unit costs to estimate network upgrade and transmission owner interconnection facilities costs.<sup>130</sup> Proposed section 6.3.1 further provides that the estimated costs of short circuit-related GRNUs identified through a subgroup will be assigned to all interconnection requests in that subgroup *pro rata* on the basis of the short circuit duty contribution of each generating facility. The estimated costs of all other GRNUs identified through a subgroup shall be assigned to all interconnection requests in that subgroup *pro rata* on the basis of the maximum megawatt electrical output of each proposed new generating facility or the amount of megawatt increase in the generating capacity of each existing generating facility as listed by the interconnection customer in its interconnection request. CAISO proposes that estimated costs of RNUs identified as a result of an electrically remote interconnection request being studied separately will be allocated solely to that interconnection request.<sup>131</sup>

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upgrade or addition identified by the CAISO to relieve an Area Deliverability Constraint.”).

<sup>130</sup> CAISO, CAISO eTariff, Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), §§ 6.3.1, 6.4.

<sup>131</sup> *Id.* §§ 6.1.3, 6.3.1.

- ii. CAISO also proposes that the cost of LDNUs identified in the on-peak deliverability assessment as part of a cluster study will be estimated in accordance with section 6.4 per unit costs, and assigned to all interconnection requests selecting full or partial capacity deliverability status based on the flow impact of each generating facility on the delivery network upgrades as determined by the generation distribution factor method set forth in the on-peak deliverability assessment method.<sup>132</sup> CAISO further proposes that the on-peak deliverability assessment will be used in the cluster study to identify those facilities necessary to provide the incremental deliverability between the level of transmission provider deliverability and such additional amount of deliverability as is necessary for the MW capacity amount of generation targeted in the cluster study. Based on such facility cost estimates, CAISO proposes to calculate a rate for ADNU costs equal to the facility cost estimate divided by the additional amount of deliverability targeted in the study. CAISO proposes that the cluster study will provide a cost estimate for each interconnection customer that equals the rate multiplied by the requested deliverable MW capacity of the generating facility in the interconnection request.<sup>133</sup> Binding Network Upgrade Costs

83. CAISO's interconnection procedures currently provide for estimates of each interconnection customer's Maximum Cost Responsibility after each of the two phases of its interconnection cluster studies. The CAISO Tariff currently provides that the interconnection customer's Maximum Cost Responsibility is the lower of its network upgrade cost estimates after Phase I or Phase II study results. Since these cost estimates are binding, an interconnection customer's ultimate cost responsibility cannot exceed the

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<sup>132</sup> *Id.* §§ 6.3.2, 6.3.4.

<sup>133</sup> *Id.* § 6.3.2.

maximum cost estimates.<sup>134</sup> CAISO states that it currently relies on individual scoping meetings with prospective interconnection customers to be able to provide an accurate and binding cost estimate.<sup>135</sup>

84. CAISO proposes to change when it can provide binding cost estimates by revising its definition of “maximum cost responsibility” in Tariff Appendix A to set the firm cost cap solely at the conclusion of the interconnection facilities study instead of as currently provided at the conclusion of the Phase I and II cluster studies. CAISO explains that changing when it can provide binding cost estimates is necessary in order to implement the Commission’s prescribed study timelines and processes.<sup>136</sup>

85. CAISO states that the Order No. 2023 timeline for cluster studies, 150 days, is significantly shorter than CAISO’s current cluster study process, which is 375 days. CAISO proposes to adopt Order No. 2023’s schedule, but argues that within the shortened timeline, which does not allow for the individual scoping meetings that it currently offers, CAISO cannot provide binding cost estimates during the cluster study or cluster restudies. CAISO states, however, that binding cost estimates could instead be provided from the results of the facilities study provided under the cluster study process. CAISO therefore proposes to provide the binding maximum cost after the interconnection facilities study rather than after the cluster study.<sup>137</sup>

**b. Comments, Protests, and Answers**

**i. Binding Network Upgrade Costs**

86. Shell Companies object to CAISO’s proposal to move its determination of the Maximum Cost Responsibility cost cap from the time it completes the Phase I and Phase II interconnection studies to the time it completes the interconnection facilities study. Shell Companies argue that delaying the implementation of the Maximum Cost Responsibility cost cap until after the interconnection facilities study introduces significant uncertainty for interconnection customers, both as to (a) potential network upgrade costs, and (b) potential withdrawal penalties should the network upgrade costs

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<sup>134</sup> Ultimate cost responsibilities in excess of a binding maximum estimate are paid by the interconnecting transmission owner and by forfeited interconnection financial security amounts of withdrawn interconnection customers.

<sup>135</sup> Filing at 21.

<sup>136</sup> *Id.* at 20; CAISO, CAISO eTariff, Proposed app. A, Maximum Cost Responsibility (MCR) (1.0.0).

<sup>137</sup> Filing at 20-21.

exceed a level at which the interconnection customer can economically proceed with its project. Shell Companies argue that CAISO's proposed modification of the timing of the Maximum Cost Responsibility cost cap is a CAISO-specific proposed Tariff revision that is not related to any requirements of Order Nos. 2023 or 2023-A, and that since CAISO has failed to justify the inclusion of the revision in its Order No. 2023 compliance filing, it should be rejected and perhaps separately justified in a later filing.<sup>138</sup>

87. CAISO responds that Shell Companies fail to recognize that revising the timing for implementation of the Maximum Cost Responsibility cap is necessary to retain that feature of CAISO's interconnection process within the framework of revisions necessary to comply with Order No. 2023 requirements.<sup>139</sup> CAISO contends that the scope of the cluster study under the Commission's *pro forma* LGIP does not contemplate specific and binding cost estimates, and that CAISO and the transmission owners would not be able to provide such estimates accurately within the 150-day time period prescribed by Order No. 2023 for completing the cluster study. CAISO asserts that instead of revising the definition of Maximum Cost Responsibility, it could have proposed in its compliance filing to remove all of the cost cap language in the Tariff and simply adopt the provisions in Order No. 2023 regarding the scope of interconnection studies by asserting that it is all the Commission contemplated in Order No. 2023. CAISO contends, however, that doing so would have meant losing the benefits that the binding cost cap provides under the CAISO interconnection process. CAISO argues that it is just and reasonable to retain and adapt the cost cap provision to comply with Order No. 2023.<sup>140</sup>

**c. Commission Determination**

**i. Cost Allocation for Specific Network Upgrades**

88. We find that CAISO has partially complied with the network upgrade cost allocation requirements of Order Nos. 2023 and 2023-A. We accept CAISO's provisions for allocating the cost of interconnection facilities (including shared interconnection facilities) because CAISO has adopted the *pro forma* LGIP provisions without modification. We accept CAISO's proposed independent entity variation not to adopt definitions of "substation network upgrades" and "system network upgrades" as just and reasonable, and not unduly discriminatory or preferential. We find that by defining the distinct network upgrade types in its Tariff,<sup>141</sup> CAISO's proposal accomplishes the

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<sup>138</sup> Shell Companies Protest at 12.

<sup>139</sup> CAISO Answer at 10.

<sup>140</sup> *Id.* at 11.

<sup>141</sup> IRNUs, GRNUs, LDNUs, and ADNUs.

purpose of Order Nos. 2023 and 2023-A by providing additional transparency for interconnection customers.<sup>142</sup>

89. We find that CAISO's has satisfied the requirement to provide a proportional impact method for what Order Nos. 2023 and 2023-A referred to as "system network upgrades," but CAISO defines as GRNUs, LDNUs, and ADNUs because the provisions of Appendix KK section 6.3 provide that costs for each discrete type of network upgrade identified in the cluster study process will be allocated among the interconnection customers within the cluster that are shown through technical analyses to contribute to the need for the discrete network upgrade.<sup>143</sup>

90. However, we find that CAISO's filing does not address its compliance with Order Nos. 2023 and 2023-A's requirements to (1) provide a definition of proportional impact method,<sup>144</sup> and (2) allocate the costs of substation network upgrades (IRNUs in CAISO) in a manner consistent with the *pro forma* LGIP.<sup>145</sup> The *pro forma* LGIP states that "substation network upgrades, including all switching stations, shall be allocated first per capita to interconnection facilities interconnecting to the substation at the same voltage level, and then per capita to each generating facility sharing the interconnection facility."<sup>146</sup> CAISO's tariff states that "interconnection customers assigned IRNUs in their cluster study will be allocated the full cost of the IRNUs in their Maximum Cost Responsibility."<sup>147</sup> CAISO's tariff, therefore, does not explain how IRNUs will be allocated to interconnection customers, as required by Order No. 2023. Accordingly, we direct CAISO to submit, within 60 days of the date of this order, a further compliance filing that either adopts (1) the *pro forma* definition of "proportional impact method," and (2) the *pro forma* provisions for allocating the costs of IRNUs (i.e., substation network upgrades), or justifies these variations under the independent entity variation standard.

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<sup>142</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1.

<sup>143</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 461; *see pro forma* LGIP § 4.2.1.

<sup>144</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 453.

<sup>145</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at PP 177-178.

<sup>146</sup> *See pro forma* LGIP § 4.2.1.1.a.

<sup>147</sup> *See* CAISO, CAISO eTariff, Proposed app. KK, § 6.3.1 (Reliability Network Upgrades (RNUs)) (0.0.0).

**ii. Binding Network Upgrade Costs**

91. We accept CAISO's proposed Tariff revision to move the determination of the Maximum Cost Responsibility from the time it completes the Phase I and Phase II interconnection studies to the time it completes the interconnection facilities study as within the scope of and compliant with the requirements of Order Nos. 2023 and 2023-A as an independent entity variation.

92. All studies under the *pro forma* LGIP provide non-binding good faith estimates of network upgrade cost responsibility but do not include binding cost caps.<sup>148</sup> Although CAISO proposes to continue to provide Maximum Cost Responsibility during the cluster study process, CAISO proposes that it will no longer offer a binding Maximum Cost Responsibility before the facilities study. CAISO has explained that attempting to offer a binding Maximum Cost Responsibility before the facilities study would require the transmission owners to provide high-cost figures to hedge their risk of inheriting costs if the costs increase based on the interconnection facilities study – the study that CAISO contends is actually intended to provide accurate cost estimates. Doing so would provide interconnection customers with less useful, potentially inflated estimates before the results of the facilities study. Therefore, CAISO proposes to revise its definition of Maximum Cost Responsibility to set the firm cost responsibility solely at the conclusion of the interconnection facilities study as a necessary adjustment to comply with the Commission's requirements in Order No. 2023 regarding the timing of interconnection studies.<sup>149</sup>

93. We find that CAISO has demonstrated that it will not be able to continue to provide binding cost estimates following the cluster study under the Order No. 2023 timeline because that timeline is shorter than CAISO's current timeline and precludes individual scoping meetings. We therefore accept CAISO's proposed revision as an independent entity variation because it is just and reasonable, not unduly discriminatory or preferential, and accomplishes the purpose of Order Nos. 2023 and 2023-A by allowing interconnection to the transmission system in a reliable, efficient, transparent, and timely manner while also continuing to provide binding cost responsibility estimates following the facilities study. We find that CAISO has appropriately balanced conforming with Order No. 2023's provisions regarding the timing of interconnection

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<sup>148</sup> See, e.g., *pro forma* LGIP, app. 7 (Transitional Cluster Study Agreement), Preamble, § 4; *pro forma* LGIP, § 5.1.1.2 (Transitional Cluster Study).

<sup>149</sup> Filing at 20-21.

studies<sup>150</sup> while continuing to offer binding cost estimates, which function to the benefit of interconnection customers, as part of the facilities study instead of as part of the cluster study.

94. For these reasons, we also find that CAISO has adequately explained how its proposed revision is within the scope of its Order No. 2023 compliance filing because it would not be possible to provide binding cost estimates accurately in 150 days and without individual scoping meetings before the cluster study, as required by Order No. 2023. Accordingly, we accept CAISO's proposal as within the scope of the compliance filing.

## 6. Study Deposits

95. In Order Nos. 2023 and 2023-A, the Commission adopted the following study deposit framework in section 3.1.1.1 (Study Deposit) of the *pro forma* LGIP:<sup>151</sup>

Size of Proposed Generating Facility Associated with Interconnection Request under the <i>pro forma</i> LGIP	Amount of Deposit
< 80 MW	\$35,000 + \$1,000/MW
≥ 80 MW < 200 MW	\$150,000
≥ 200 MW	\$250,000

96. The Commission required the interconnection customer to submit a non-refundable application fee of \$5,000 and a refundable study deposit upon the interconnection customer's entry into the cluster.<sup>152</sup>

97. In Order No. 2023, the Commission deleted section 8.1.1 of the *pro forma* LGIP to remove the requirement for the transmission provider to invoice interconnection customers on a monthly basis for the work conducted on the interconnection facilities study. Accordingly, the Commission also deleted from article 5.0 of Appendix 3

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<sup>150</sup> See Order No. 2023, 184 FERC ¶ 61,054 at P 261 (declining to adopt Clean Energy Associations' suggestion that the metrics also identify the level of accuracy of studies relative to final costs).

<sup>151</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 502-503; Order No. 2023-A, 186 FERC ¶ 61,199 at P 188; *see pro forma* LGIP § 3.1.1.1.

<sup>152</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 505; Order No. 2023-A, 186 FERC ¶ 61,199 at P 189; *see pro forma* LGIP § 3.1.1.1.

(Interconnection Facilities Study Agreement) to the *pro forma* LGIP language including the monthly invoicing requirement.<sup>153</sup>

98. In Order No. 2023-A, the Commission modified section 13.3 of the *pro forma* LGIP to remove language pertaining to using previous study deposits to offset the cost of a subsequent study because Order No. 2023 established only an initial study deposit at the beginning of the study process to be used for all studies under the cluster study process.<sup>154</sup>

**a. CAISO's Compliance Filing**

99. CAISO proposes in sections 3.5.1.1 and 3.5.1.2 of its RIS to incorporate, with CAISO-specific modifications, the study deposit framework adopted in Order Nos. 2023 and 2023-A.<sup>155</sup> In addition, CAISO removed the requirement for the transmission provider to invoice interconnection customers on a monthly basis for the work conducted on the interconnection facilities study, in compliance with *pro forma* LGIP section 8.1.1.

**b. Commission Determination**

100. We find that CAISO's proposed language concerning study deposits complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission's *pro forma* LGIP provisions with only minor modifications to provide additional CAISO-specific details such as inserting the terms "CAISO" and "RIS" where appropriate.

**7. Site Control**

101. In Order No. 2023, the Commission revised the definition of "site control" in section 1 (Definitions) of the *pro forma* LGIP and article 1 (Definitions) of the *pro forma* LGIA.<sup>156</sup> The definition, as modified, states that site control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to

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<sup>153</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 506; *see pro forma* LGIP, app. 3, art. 5.0.

<sup>154</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 189; *see pro forma* LGIP § 13.3.

<sup>155</sup> CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.5.1.1, 3.5.1.2; *id.* app. 3 (Cluster Study Agreement for Queue Clusters) (0.0.0).

<sup>156</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 584; *see pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.



develop a site of sufficient size to construct and operate the generating facility; (2) an option to purchase or acquire a leasehold site of sufficient size to construct and operate the generating facility; or (3) any other documentation that clearly demonstrates the right of an interconnection customer to exclusively occupy a site of sufficient size to construct and operate the generating facility.

102. The Commission revised section 3.4.2 of the *pro forma* LGIP to require interconnection customers to demonstrate 90% site control at the time of submission of the interconnection request.<sup>157</sup> The Commission further revised sections 8.1 and 11.3 of the *pro forma* LGIP to require interconnection customers to provide evidence of 100% site control for the generating facility at the time of execution of the facilities study agreement and when executing, or requesting the unexecuted filing of, the LGIA.<sup>158</sup> The Commission also revised sections 3.4.2 and 11.3 of the *pro forma* LGIP to state that, if an interconnection customer cannot demonstrate the requisite level of site control at the relevant milestone of the interconnection process, its interconnection request will be deemed withdrawn and it could be subject to withdrawal penalties under certain circumstances.<sup>159</sup>

103. The Commission modified section 3.4.2 of the *pro forma* LGIP to provide that site control for a generating facility that is co-located with one or more generating facilities on the same site and behind the same point of interconnection must be demonstrated by a contract or other agreement that allows for shared land use for all generating facilities that are co-located that meets the provisions of the site control definition.<sup>160</sup>

104. The Commission required a transmission provider to establish per-MW acreage requirements for each generating facility technology type and to publicly post these acreage requirements.<sup>161</sup> The Commission modified the *pro forma* LGIP and *pro forma* LGIA definitions of “generating facility” and “generating facility capacity” to clarify that these definitions include hybrid generating facilities, and stated that a transmission provider’s per-MW acreage requirements for each generating facility technology-type

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<sup>157</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 594; *see pro forma* LGIP § 3.4.2.

<sup>158</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 594; *see pro forma* LGIP §§ 8.1, 11.3.

<sup>159</sup> *See infra* P 117.

<sup>160</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 586; *see pro forma* LGIP § 3.4.2.

<sup>161</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 595; *see pro forma* LGIP §§ 3.4.2, 11.3.

must include specific requirements for hybrid generating facilities.<sup>162</sup> The Commission further clarified that generating facilities that are co-located on the same site and behind the same point of interconnection are subject to the technology-specific acreage requirements based on the generating facilities' technology-type.

105. The Commission eliminated the interconnection customer's options to: (1) provide a deposit in lieu of site control demonstration, except in limited circumstances where an interconnection customer demonstrates a regulatory limitation to obtaining site control; and (2) post \$250,000 of non-refundable security in lieu of site control at LGIA execution. The Commission revised section 3.4.2 of the *pro forma* LGIP to provide that interconnection customers with regulatory limitations may submit an initial deposit in lieu of site control of \$10,000 per MW, subject to a floor of \$500,000 and a ceiling of \$2 million, which shall be refundable but may not be applied toward interconnection studies or withdrawal penalties, if applicable. The Commission stated that, when an interconnection customer facing regulatory limitations provides a deposit in lieu of site control, the deposit will be accepted and held by the transmission provider until the interconnection customer can demonstrate 90% site control prior to execution of the facilities study agreement or 100% site control at execution of the facilities study agreement or thereafter. The Commission also modified Appendix B (Milestones) of the *pro forma* LGIA to clarify that an interconnection customer facing qualifying regulatory limitations must demonstrate 100% site control within 180 calendar days of the effective date of the LGIA; if it cannot, the LGIA may be terminated per article 17 (Default) of the *pro forma* LGIA and the interconnection customer may be subject to withdrawal penalties.<sup>163</sup>

106. The Commission required each transmission provider to define regulatory limitations relevant to its service territory, to publicly post the definition, and to provide a narrative description of how it defines regulatory limitations as part of its compliance filing.<sup>164</sup> The Commission did not require a uniform definition of regulatory limitations for all transmission providers, but clarified that a regulatory limitation is generally a federal, state, Tribal, or local law that makes it practically infeasible to obtain site control within the time frame detailed in the *pro forma* LGIP.

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<sup>162</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 603; *see pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.

<sup>163</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 605; *see pro forma* LGIA, app. B.

<sup>164</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 607.

**a. CAISO's Compliance Filing**

107. CAISO proposes in sections 8.1.1 and 13.3 of the RIS, and article 1 and Appendix B of its *pro forma* LGIA, to incorporate, with only CAISO-specific modifications, the site control reforms adopted in Order Nos. 2023 and 2023-A.<sup>165</sup> CAISO also proposes language in section 3.5.1(iii) of the RIS to adopt, without modification, the reforms of the *pro forma* LGIP.

108. CAISO states that it will include the definition of regulatory limitation in its business practice manual. Within its service territory, CAISO intends to define “regulatory limitation” as a federal, state, or Tribal government process for acquiring site control that cannot be completed in the timeframe required for site control demonstration at the time of the interconnection request.

**b. Commission Determination**

109. We find that CAISO complies with the site control requirements of Order Nos. 2023 and 2023-A. Specifically, we find that CAISO’s proposed language concerning site control complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission’s *pro forma* LGIP provisions with only CAISO-specific modifications. We also find that CAISO has met the Commission’s requirement to define regulatory limitations relevant to its service territory, to publicly post the definition, and to provide a narrative description of how it defines regulatory limitations as part of its compliance filing.

**8. Commercial Readiness**

110. In Order No. 2023, the Commission revised section 1 of the *pro forma* LGIP to define “commercial readiness deposit” and sections 3.4.2, 7.5, 8.1, and 11.3 of the *pro forma* LGIP to require interconnection customers to submit commercial readiness deposits to help reduce the submission of speculative, commercially non-viable interconnection requests into interconnection queues.<sup>166</sup> For the initial commercial readiness deposit submitted with its interconnection request, the interconnection customer

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<sup>165</sup> CAISO, CAISO eTariff, Proposed app. KK, § 8 (Interconnection Facilities Study and TP Deliverability Allocation Process) (0.0.0), § 8.1.1; *id.* § 13 (Generator Interconnection Agreement) (0.0.0), § 13.3; *id.* Proposed app. LL, art. 1 (Definitions) (0.0.0), Generating Facility, Generating Facility Capacity, Site Control; *id.* Proposed app. LL, app. B (Milestones) (0.0.0).

<sup>166</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 690; *see pro forma* LGIP §§ 1, 3.4.2, 7.5, 8.1, 11.3.

must pay a deposit of two times its study deposit to enter the cluster study.<sup>167</sup> The commercial readiness deposit to enter the cluster restudy is the amount required to bring the total amount of the interconnection customer's commercial readiness deposit to 5% of the interconnection customer's network upgrade cost assignment identified in the cluster study,<sup>168</sup> and the commercial readiness deposit to enter the facilities study is the amount required to bring the total amount of the interconnection customer's commercial readiness deposit to 10% of the interconnection customer's network upgrade cost assignment identified in the cluster study or restudy, as applicable.<sup>169</sup>

**a. CAISO's Compliance Filing**

111. CAISO proposes RIS sections 3.5.1, 7.4.1, 8.1.1, and 13.3 to incorporate, with one minor modification, the commercial readiness reforms adopted in Order Nos. 2023 and 2023-A.<sup>170</sup> Specifically, where the Commission's *pro forma* language specifies that the Commercial Readiness Deposit is submitted to the transmission provider, CAISO proposes to specify in RIS section 14.4.1 (Cost Allocation, Commercial Readiness Deposit, GIA Deposit, and Reimbursement for Multiple Participating TOs) that these Commercial Readiness Deposits are provided to the Participating Transmission Owner. CAISO explains that this framework alleviates the administrative burden on CAISO of holding such deposits as intermediary, because these deposits ultimately go to the Participating Transmission Owner for funding network upgrades. CAISO states that interconnection customers and transmission owners are accustomed to this practice in CAISO's service area and this process will not undermine the intention of the commercial readiness deposit directive on Order No. 2023.<sup>171</sup>

**b. Commission Determination**

112. We find that CAISO's proposed language concerning commercial readiness partially complies with the requirements of Order Nos. 2023 and 2023-A. CAISO adopts

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<sup>167</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 692; *see pro forma* LGIP § 3.4.2.

<sup>168</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 693; *see pro forma* LGIP § 7.5.

<sup>169</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 693; *see pro forma* LGIP § 8.1.

<sup>170</sup> Filing at 32; CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.5.1; *id.* § 7 (Annual Reassessment, Cluster Restudy, & Activities in Preparation for the Interconnection Facilities Study) (0.0.0), § 7.4.1; *id.* § 8 (Interconnection Facilities Study & TP Deliverability Allocation Process) (0.0.0), § 8.1.1; *id.* § 13 (Generator Interconnection Agreement) (0.0.0), § 13.3.

<sup>171</sup> Filing at 32.

the Commission's *pro forma* LGIP provisions with one minor modification. We find that CAISO's proposal to have the readiness deposit submitted to the Participating Transmission Owner is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of the commercial readiness requirements of Order Nos 2023 and 2023-A because the deposit still serves to deter speculative interconnection requests. However, we note that while RIS sections 7.4.1, 8.1.1, and 14.4.1 explicitly provide that the Commercial Readiness Deposit is submitted to the Participating Transmission Owner, RIS sections 3.5.1 and 13.3 do not specify that the interconnection customer will submit a commercial readiness deposit to the Participating Transmission Owner. Therefore, we direct CAISO to submit, within 60 days of the date of this order, a further compliance filing that explicitly identifies the entity(ies) to which the interconnection customer will submit a commercial readiness deposit.

## 9. LGIA Deposit

113. In Order No. 2023, the Commission added the new term "LGIA deposit" to section 1 of the *pro forma* LGIP and article 1 of the *pro forma* LGIA and revised section 11.3 of the *pro forma* LGIP to require an interconnection customer to submit a deposit when executing the LGIA, or requesting the filing of an unexecuted LGIA, that will increase the total commercial readiness deposit paid to be equal to 20% of the estimated network upgrade costs identified in the LGIA (excluding the study deposit and site control deposit submitted when an interconnection customer faces a regulatory limitation).<sup>172</sup> Additionally, the Commission revised section 11.3 of the *pro forma* LGIP to require that an interconnection customer submit the LGIA deposit when returning the executed LGIA to the transmission provider, or within 10 business days of the interconnection customer requesting that the LGIA be filed unexecuted at the Commission.

114. The Commission also revised the *pro forma* LGIP and *pro forma* LGIA to treat the LGIA deposit as part of the security the interconnection customer must provide for the construction of network upgrades and transmission provider's interconnection facilities.<sup>173</sup> Finally, the Commission revised article 11.5 (Provision of Security) of the *pro forma* LGIA to require the transmission provider to draft Appendix B of the interconnection customer's LGIA to clearly explain and estimate at which point of

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<sup>172</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 714; *see pro forma* LGIP §§ 1, 11.3; *see also pro forma* LGIA art. 1.

<sup>173</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 717; *see pro forma* LGIP § 11.3; *see also pro forma* LGIA art. 11.5.

construction the interconnection customer's LGIA deposit will be depleted, and the interconnection customer must provide additional financial security.<sup>174</sup>

**a. CAISO's Compliance Filing**

115. CAISO proposes revisions to its Tariff Appendix A (Definitions) and adds RIS section 13.3, LGIA Articles 1, 2.4, 11.5, and 11.4.1.1 and SGIA article 6.4.1 and Attachment 1 to incorporate the *pro forma* LGIA deposit provisions adopted in Order Nos. 2023 and 2023-A.<sup>175</sup> CAISO proposes to adopt without modification the language pertaining to LGIA deposits from the *pro forma* LGIP, but has generalized references to this deposit as a "GIA deposit" in order to maintain consistency with its use of a single set of interconnection procedures for small and large generators.<sup>176</sup> In its *pro forma* SGIA article 6.4.1 and *pro forma* LGIA articles 1, 2.4, 11.4.1 and 11.5.1, CAISO proposes to change references of "Interconnection Financial Security" to "GIA Deposit."<sup>177</sup>

**b. Commission Determination**

116. We find that CAISO's proposed revisions concerning the LGIA deposit, referenced by CAISO as the GIA deposit, comply with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission's *pro forma* LGIP and *pro forma* LGIA provisions and proposes only to modify the *pro forma* LGIA language by replacing the term "LGIA deposit" with "GIA deposit" to include both the LGIA and SGIA deposits and by replacing the term "Interconnection Financial Security" with "GIA Deposit" to maintain consistency with its use of a single set of interconnection procedures for small and large generators and maintain consistency with reference to its terms for interconnection deposits.

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<sup>174</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 693; *see pro forma* LGIA art. 11.5.

<sup>175</sup> Filing at 33; CAISO, CAISO eTariff, Proposed app. A, GIA Deposit (0.0.0); *id.* Proposed app. KK, § 13 (Generator Interconnection Agreement) (0.0.0), § 13.3; *id.* Proposed app. LL, art. 1 (Definitions) (0.0.0); *id.* art. 2 (Effective Date, Term & Termination) (0.0.0), § 2.4; *id.* art. 11 (Performance Obligation) (0.0.0), §§ 11.4.1.1, 11.5; *id.* app. MM, attach. 1 (Glossary of Terms) (0.0.0) (Proposed app. MM).

<sup>176</sup> *See* Filing at 33; *see also pro forma* LGIP, § 11.3 (Execution and Filing).

<sup>177</sup> *See* Filing, attach. D at 10.

## 10. Withdrawal Penalties

117. In Order No. 2023, the Commission added the term “withdrawal penalty” to section 1 of the *pro forma* LGIP and article 1 of the *pro forma* LGIA.<sup>178</sup> The Commission revised section 3.7 (Withdrawal) of the *pro forma* LGIP and added sections 3.7.1 (Withdrawal Penalty), 3.7.1.1 (Calculation of the Withdrawal Penalty), and 3.7.1.2 (Distribution of the Withdrawal Penalty) related to withdrawal penalties to the *pro forma* LGIP.<sup>179</sup> The Commission required transmission providers to apply withdrawal penalties to an interconnection customer if: (1) the interconnection customer withdraws its interconnection request at any point in the interconnection process; (2) the interconnection customer’s interconnection request has been deemed withdrawn by the transmission provider at any point in the interconnection process; or (3) the interconnection customer’s generating facility does not reach commercial operation (such as when an interconnection customer’s LGIA is terminated prior to reaching commercial operation).<sup>180</sup>

118. However, the Commission explained that a withdrawal penalty must only be assessed if the withdrawal has a material impact on the cost or timing of any interconnection request with an equal or lower queue position. The Commission stated that the interconnection customer will also be exempt from paying a withdrawal penalty if: (1) the interconnection customer withdraws its interconnection request after receiving the most recent cluster study report and the network upgrade costs assigned to the interconnection customer’s request have increased 25% compared to the previous cluster study report; or (2) the interconnection customer withdraws its interconnection request after receiving the individual facilities study report and the network upgrade costs assigned to the interconnection customer’s request have increased by more than 100% compared to costs identified in the cluster study report.<sup>181</sup>

119. The Commission added *pro forma* LGIP section 3.7.1.1 to require a transmission provider to assess a withdrawal penalty on an interconnection customer with a proposed generating facility that does not reach commercial operation based either on the actual study costs or on a percentage of the interconnection customer’s assigned network upgrade costs, depending on in which phase the interconnection customer withdraws its

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<sup>178</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 780; *see pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.

<sup>179</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 780; *see pro forma* LGIP §§ 3.7, 3.7.1, 3.7.1.1, 3.7.1.2.

<sup>180</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 783.

<sup>181</sup> *Id.* P 784.

interconnection request.<sup>182</sup> Thus, the withdrawal penalty for an interconnection customer will be calculated as the greater of the study deposit or: (1) two times the study cost if the interconnection customer withdraws during the cluster study or after receipt of a cluster study report; (2) 5% of the interconnection customer's identified network upgrade costs if the interconnection customer withdraws during the cluster restudy or after receipt of any applicable restudy reports; (3) 10% of the interconnection customer's identified network upgrade costs if the interconnection customer withdraws during the facilities study, after receipt of the individual facilities study report, or after receipt of the draft LGIA; or (4) 20% of the interconnection customer's identified network upgrade costs if, after executing, or requesting to file unexecuted, the LGIA, the interconnection customer's LGIA is terminated before its generating facility achieves commercial operation.

120. The Commission also added *pro forma* LGIP section 3.7.1.2 to require a transmission provider to use the withdrawal penalty funds as follows: (1) to fund studies and restudies in the same cluster; (2) if withdrawal penalty funds remain, to offset net increases in costs borne by other remaining interconnection customers from the same cluster for network upgrades shared by both the withdrawing and non-withdrawing interconnection customers prior to the withdrawal; and (3) if any withdrawal penalty funds remain, they will be returned to the withdrawing interconnection customer.<sup>183</sup>

121. In Order No. 2023-A, the Commission modified *pro forma* LGIP section 3.7.1.2.1 (Initial Distribution of Withdrawal Penalties Prior to Assessment of Network Upgrade Costs Previously Shared with Withdrawn Interconnection Customers in the Same Cluster) to clarify that withdrawal penalties dispersed to remaining interconnection customers cannot exceed the total amount of withdrawal penalties collected from the cluster.<sup>184</sup> The Commission also revised *pro forma* LGIP section 3.7.1 to state that there will be no withdrawal penalty assessed if the withdrawal does not have a material impact on any interconnection request in the same cluster, as well as to add clarifying edits to reference cluster restudies.<sup>185</sup> The Commission modified *pro forma* LGIP section

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<sup>182</sup> *Id.* P 791; *see pro forma* LGIP § 3.7.1.

<sup>183</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 798; *see pro forma* LGIP § 3.7.1.2.

<sup>184</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 231; *see pro forma* LGIP § 3.7.1.2.1.

<sup>185</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at PP 233, 243; *see pro forma* LGIP §§ 3.7.1, 3.7.1.1(a).



3.7.1.2.1 to clarify that the interconnection studies referenced in that section include cluster restudies and interconnection facilities studies.<sup>186</sup>

122. Finally, the Commission defined “transitional withdrawal penalty” in *pro forma* LGIP section 1 and modified *pro forma* LGIP sections 5.1.1, 5.1.1.1, and 5.1.1.2 to reference the transitional withdrawal penalty.<sup>187</sup>

**a. CAISO’s Compliance Filing**

123. CAISO proposes language in Appendix A, sections 3.8, 3.8.1, 3.8.1.1, and 7.6 of its RIS, and article 1 of its proposed *pro forma* LGIA, to incorporate with certain limited independent entity variations the withdrawal penalty revisions adopted in Order Nos. 2023 and 2023-A.<sup>188</sup> Specifically, CAISO proposes to adopt the same requirements for being subject to a withdrawal penalty and the same methodology for calculating the withdrawal penalty set forth in Order No. 2023, with only minor CAISO-specific changes. For example, because CAISO is not conducting a transition, it does not include a definition for “transitional withdrawal penalty” in its Appendix A Tariff definitions. CAISO also proposes minor modifications to its withdrawal terms and conditions, including penalty and calculation thereof, in RIS sections 3.8, 3.8.1, and 3.8.1.1 to replace generic terms.

124. In addition, in RIS section 7.6, CAISO proposes to address the distribution of withdrawal penalties by adding to and revising the existing provisions from the GIDAP regarding the calculation and distribution of non-refundable amounts to include withdrawal penalties, rather than adopting the provisions in the *pro forma* LGIP on withdrawal penalty distribution.<sup>189</sup> Specifically, CAISO proposes three modifications to the Commission’s *pro forma* LGIP language in RIS section 7.6 to: (1) use withdrawal penalties assessed prior to the cluster study results to offset the cost of the reassessment for all customers in the restudy; (2) use any remaining withdrawal penalties assessed to

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<sup>186</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 237; *see pro forma* LGIP § 3.7.1.2.1.

<sup>187</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 240; *see pro forma* LGIP §§ 1, 5.1.1, 5.1.1.1, 5.1.1.2.

<sup>188</sup> Filing at 33-34; CAISO, CAISO eTariff, Proposed app. A, Withdrawal Penalty (0.0.0); *id.* Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.8, 3.8.1, 3.8.1.1; *id.* § 7 (Ann. Reassessment, Cluster Restudy, & Activities in Preparation for the Interconnection Facilities Study) (0.0.0), § 7.6; *id.* Proposed app. LL, art. 1 (Definitions) (0.0.0), Withdrawal Penalty.

<sup>189</sup> Filing at 33.

interconnection customers withdrawing after the cluster study results to contribute to the construction of still-needed network upgrades for all applicable interconnection customers remaining in the queue (i.e., CAISO's current process for using non-refundable deposits); and (3) apply any non-disbursed withdrawal penalties to offset regional and local transmission revenue requirements.<sup>190</sup>

125. In support of these independent entity variations, CAISO states that the Commission explained in Order No. 2023 that using withdrawal penalties to reduce the cost impacts on customers remaining in the queue eliminates the potential for cascading withdrawals.<sup>191</sup> To accomplish this purpose, CAISO proposes to maintain its process for use of non-refundable amounts, which varies from that proposed in Order No. 2023, which instead first uses withdrawal penalties to support the funding of studies. CAISO proposes that reducing the costs of network upgrades benefits both the remaining interconnection customers who will have a lower cost responsibility, and ultimately the ratepayers who reimburse that funding over time.<sup>192</sup>

126. In addition, CAISO states that the Commission has previously found its existing Tariff provisions on the calculation and distribution of non-refundable amounts to be just and reasonable<sup>193</sup> and that they allow CAISO to "more efficiently and equitably administer the interconnection queue."<sup>194</sup> CAISO represents that folding withdrawal penalties into its existing calculation and distribution methodology satisfies the independent entity variation standard because doing so will likewise allow CAISO to administer the interconnection queue more efficiently and equitably, without undue discrimination.<sup>195</sup>

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<sup>190</sup> Filing at 33-34; CAISO, CAISO eTariff, Proposed app. KK, § 7 (Ann. Reassessment, Cluster Restudy, & Activities in Preparation for the Interconnection Facilities Study) (0.0.0), § 7.6.

<sup>191</sup> Filing at 34 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 799).

<sup>192</sup> *Id.*

<sup>193</sup> *Id.* (citing *Cal. Indep. Sys. Operator Corp.*, 149 FERC ¶ 61,231, at PP 26-29 (2014)).

<sup>194</sup> *Id.* (quoting *Cal. Indep. Sys. Operator Corp.*, 180 FERC ¶ 61,143, at P 2 & n.2 (2022)).

<sup>195</sup> *Id.* (citing Order No. 2023, 184 FERC ¶ 61,054 at PP 1, 1764).

**b. Comments, Protests, and Answers**

127. Shell Companies argue that CAISO's proposed Tariff language in section 3.8.1 fails to include consideration of an increase in the costs of Affected System Network Upgrades when determining whether a withdrawal penalty should be applied.<sup>196</sup> Shell Companies contend that in Order No. 2023-A, the Commission clarified that this withdrawal penalty provision also should recognize an increase in the costs of Affected System Network Upgrades.<sup>197</sup> Shell Companies also assert that CAISO has not demonstrated that its proposed Tariff language is consistent with or superior to the requirements of Order No. 2023, is just and reasonable and not unduly discriminatory or preferential, and will accomplish the purposes of Order No. 2023.

128. In response, CAISO asserts that the Commission did not require any revisions to the *pro forma* LGIP in the paragraph of Order No. 2023-A cited by Shell Companies. CAISO states that "because an affected system network upgrade is a subset of network upgrades, affected system network upgrade cost estimates should be included in the total cost increase if listed in the facilities study report."<sup>198</sup> CAISO notes that the withdrawal penalty language to which the Commission was referring, and which is contained in section 3.7.1 of the *pro forma* LGIP, refers only to network upgrades without specifically mentioning affected system network upgrades. CAISO states that because the latter are a subset of the former, there was no need to separately reference affected system network upgrades in that section of the *pro forma* LGIP.

**c. Commission Determination**

129. We find that CAISO's proposal complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission's *pro forma* LGIP and *pro forma* LGIA provisions with minor modification. We accept CAISO's proposed independent entity variations because we find that they are just and reasonable, not unduly discriminatory or preferential, and accomplish the purposes of Order Nos. 2023 and 2023-A by ensuring that interconnection customers are able to interconnect to the transmission system in a reliable, efficient manner, and prevent undue discrimination.

130. CAISO proposes three modifications to the Commission's *pro forma* language in RIS section 7.6 to: (1) use withdrawal penalties assessed prior to the cluster study results to offset the cost of the reassessment for all customers in the restudy; (2) use any remaining withdrawal penalties assessed to interconnection customers withdrawing after

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<sup>196</sup> Shell Companies Protest at 6.

<sup>197</sup> *Id.* (citing Order 2023-A, 186 FERC ¶ 61,199 at P 503).

<sup>198</sup> CAISO Answer at 4 (quoting Order No. 2023-A, 186 FERC ¶ 61,199 at P 503).

the cluster study results to contribute to the construction of still-needed network upgrades for all applicable interconnection customers remaining in the queue; and (3) apply any non-disbursed withdrawal penalties to offset regional and local transmission revenue requirements.

131. Although CAISO's proposal to use withdrawal penalties assessed prior to the cluster study results to offset the cost of reassessment for all customers in the restudy differs from the *pro forma* LGIP, which requires that such penalties fund studies for customers in the same cluster that have executed an LGIA or requested an LGIA to be filed unexecuted, we find that, under both scenarios, the appropriate customers' costs are being offset. In addition, we find that CAISO's proposal to use withdrawal penalties to contribute to the construction of still-needed network upgrades will generally reduce the cost impacts on customers remaining in the queue while accounting for CAISO's network upgrade cost allocation framework. Doing so will decrease the potential for cascading withdrawals by offsetting the resulting increase in network upgrade costs thus deterring speculative interconnection requests. We find that this accomplishes the purposes of Order No. 2023 by ensuring that interconnection customers are able to interconnect to the transmission system in a reliable and efficient manner.<sup>199</sup>

132. Regarding CAISO's proposal to use any remaining withdrawal penalties to offset regional and local transmission revenue requirements, which differs from the *pro forma* LGIP requirement to directly return withdrawal penalty balances to the withdrawn customer, the Commission has previously found that CAISO's process is just and reasonable with regard to the distribution of non-refundable amounts.<sup>200</sup> In CAISO, interconnection customers finance network upgrades and the Participating Transmission Owner reimburses the interconnection customer for network upgrade financing costs using cash repayment or merchant transmission congestion revenue rights<sup>201</sup> and includes those costs in its transmission revenue requirements.<sup>202</sup> Therefore, in CAISO, not only is there a connection between the generator interconnection process and transmission revenue requirements, but CAISO's existing framework already aligns the withdrawal penalty funds with the Participating Transmission Owners' costs. For these reasons, we

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<sup>199</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 799.

<sup>200</sup> *Cal. Indep. Sys. Operator Corp.*, 149 FERC ¶ 61,231 at PP 26-29.

<sup>201</sup> CAISO, CAISO eTariff, existing app. DD, § 14.3.2 (Repayment of Amounts Advanced for Network Upgrades and Refund of Interconnection Financial Security) (12.0.0). CAISO, CAISO eTariff, Proposed app. KK, § 14.3.2 (Repayment of Amounts Advanced for Network Upgrades and Refund of Interconnection Financial Security) (0.0.0).

<sup>202</sup> Filing at 5.

accept CAISO's proposed independent entity variation. We find that CAISO's withdrawal penalty framework deters speculative interconnection requests<sup>203</sup> because interconnection customers are aware that they will fully forfeit their withdrawal penalty upon withdrawal (without the possibility of partial refund available under the *pro forma* LGIP). We therefore believe that CAISO's proposal discourages speculative interconnection customers from entering the queue, which could lower the likelihood of cascading restudies and is just and reasonable and accomplishes the purposes of Order No. 2023 and 2023-A.

133. Lastly, we agree with CAISO that Order No. 2023-A did not require any revisions to *pro forma* section 3.8.1 in the paragraph of Order No. 2023-A cited by Shell Companies. Furthermore, as stated by Order No. 2023-A, affected system network upgrades are a subset of network upgrades; therefore, there is no requirement for CAISO to specifically reference them in their proposed section 3.8.1.<sup>204</sup>

## 11. Transition Process

134. In Order No. 2023, the Commission established a transition process from a first-come, first-served serial study process to the first-ready, first-served cluster study process in *pro forma* LGIP section 5 (Procedures for Interconnection Requests Submitted Prior to Effective Date of the Cluster Study Revisions).<sup>205</sup> The Commission required transmission providers to offer existing interconnection customers up to three transition options, depending on which phase of the serial study process their interconnection requests are in: (1) a transitional serial study, (2) a transitional cluster study, and (3) withdrawal from the interconnection queue without penalty.<sup>206</sup> The Commission added several new terms related to the transition process to the *pro forma* LGIP, as well as a *pro forma* transitional cluster study agreement in new Appendix 7 (Transitional Cluster Study Agreement) of the *pro forma* LGIP and a *pro forma* Transitional Serial Interconnection Facilities Study Agreement in new Appendix 8 (Transitional Serial Interconnection Facilities Study Agreement) of the *pro forma* LGIP.<sup>207</sup>

135. The Commission required transmission providers to offer the transitional serial study option to interconnection customers that have been tendered a facilities study

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<sup>203</sup> See Order No. 2023, 184 FERC ¶ 61,054 at P 781.

<sup>204</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 503.

<sup>205</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 855; see *pro forma* LGIP §§ 1, 5.

<sup>206</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 855; see *pro forma* LGIP § 5.1.1.

<sup>207</sup> See *pro forma* LGIP § 1, apps. 7, 8.

agreement, even if they have not yet executed the agreement, as of 30 calendar days after the filing date of the transmission provider's initial filing to comply with Order No. 2023.<sup>208</sup> Similarly, the Commission required transmission providers to offer the transitional cluster study option to interconnection customers with an assigned queue position as of 30 calendar days after the filing date of the transmission provider's initial filing to comply with Order No. 2023. The Commission required the transmission provider to include the filing date for its compliance in *pro forma* LGIP sections 5.1.1, 5.1.1.1, and 5.1.1.2.<sup>209</sup>

136. The Commission also required the transmission provider to tender the appropriate transitional study agreements to eligible interconnection customers no later than the Commission-approved effective date of the transmission provider's compliance filing with Order No. 2023.<sup>210</sup> The Commission adopted a deadline—60 calendar days after the Commission-approved effective date—for an interconnection customer to either exit the queue without penalty or choose a transition option and meet the relevant site control and deposit requirements.<sup>211</sup> Furthermore, the Commission clarified that transmission providers that have already adopted a cluster study process or are currently undergoing a transition to a cluster study process will not be required to implement a new transition process.<sup>212</sup>

137. The Commission also adopted transition process deposits, withdrawal penalties, and deadlines.<sup>213</sup> The Commission required that: (1) interconnection customers electing the transitional serial study must provide a deposit equal to 100% of the interconnection facility and network upgrade costs allocated to the interconnection customer in the system impact study; and (2) interconnection customers electing the transitional cluster study must provide a deposit equal to \$5 million.<sup>214</sup>

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<sup>208</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 855; *see pro forma* LGIP §§ 5.1.1.1, 5.1.1.2.

<sup>209</sup> *See pro forma* LGIP §§ 5.1.1, 5.1.1.1, 5.1.1.2.

<sup>210</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 867.

<sup>211</sup> *Id.* P 864; *see pro forma* LGIP §§ 5.1.1, 5.1.1.1, 5.1.1.2.

<sup>212</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 861.

<sup>213</sup> *Id.* P 855.

<sup>214</sup> *Id.* P 859.

138. In Order No. 2023-A, the Commission added definitions to the *pro forma* LGIP for the terms “transitional cluster study agreement” and “transitional serial interconnection facilities study agreement.”<sup>215</sup> The Commission clarified that withdrawals occurring after the 60-day deadline will be subject to the new withdrawal penalties, with certain exceptions. To reflect these clarifications, the Commission also added new *pro forma* LGIP section 5.1.2 (Transmission Providers with Existing Cluster Study Processes or Currently in Transition) establishing that interconnection customers in the queue of a transmission provider not conducting a transition process under *pro forma* LGIP section 5.1.1 must comply with the new readiness requirements proposed by the transmission provider within 60 days of the Commission-approved effective date of the transmission provider’s compliance filing.<sup>216</sup>

**a. CAISO’s Compliance Filing**

139. CAISO argues that since it already has a cluster study process, it is not required by Order No. 2023 to implement a new transition process and that Order No. 2023’s transitional tariff revisions are inapplicable.<sup>217</sup> However, CAISO proposes to create in its existing pre-Order No. 2023 interconnection procedures a transition process only for its Cluster 15 interconnection requests, the first cluster study to follow CAISO’s Order No. 2023 cluster study process.<sup>218</sup> In addition, CAISO proposes to adopt Order No. 2023’s commercial readiness deposits as part of this transition process to reduce speculative interconnection requests.<sup>219</sup> CAISO proposes to revise section 17 of its existing Appendix DD interconnection procedures to provide that between October 1, 2024, and December 1, 2024, interconnection customers already in Cluster 15 may submit any element associated with initiating an interconnection request that was not previously

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<sup>215</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 263; *see pro forma* LGIP § 1.

<sup>216</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 75; *see pro forma* LGIP § 5.1.2.

<sup>217</sup> Filing at 35 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 861).

<sup>218</sup> *See* CAISO, CAISO eTariff, app. DD, § 17 (Cluster 15 Unique Procedures) (2.0.0) (Proposed app. DD).

<sup>219</sup> *See* Order No. 2023, 184 FERC ¶ 61,054 at P 490; *see also pro forma* LGIP §§ 3.4.2, § 7.5, § 8.1; CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.5.1; *id.* § 7 (Annual Reassessment, Cluster Restudy, & Activities in Preparation for the Interconnection Facilities Study) (0.0.0), § 7.4.1; *id.* § 8 (Interconnection Facilities Study & TP Deliverability Allocation Processes) (0.0.0), § 8.1.1 (requiring that the interconnection customer submit the commercial readiness deposit at the beginning of the initial cluster study, the cluster restudy, and the facilities study).

submitted but would be required under CAISO's Order No. 2023 proposed interconnection procedures. CAISO explains that among the items that could be submitted by the interconnection customer are revised study deposits and site control documentation for those customers that had not already demonstrated site control, and a commercial readiness deposit. CAISO proposes that interconnection requests with deficiencies after that date will be deemed invalid and will not be included in Cluster 15. CAISO proposes that a Cluster 15 interconnection customer that withdraws its interconnection request prior to January 1, 2025, will receive a refund of its interconnection study deposit, including any interest earned, minus any costs expended on the interconnection customer's behalf. Also prior to January 1, 2025, if an interconnection customer that withdraws submitted a site exclusivity deposit, it will receive a complete refund of its site exclusivity deposit, including any interest earned.<sup>220</sup>

140. CAISO states that between October 1 and December 1, 2024, interconnection customers could also modify their interconnection requests: (a) as permissible under the current interconnection procedures for modifications before the Phase II study; (b) to change generating technology or fuel; and (c) to add or increase energy storage capacity. CAISO states that interconnection customers cannot increase their requested interconnection service capacity or change their point of interconnection outside of their study area, and that modifications during this period will have no impact on interconnection customers' rights to modify their projects under the CAISO Tariff after the study commences. CAISO proposes to validate Cluster 15 interconnection requests between January 1, 2025, and May 1, 2025, stating that the longer-than-typical validation period is critical due to Cluster 15's unique and overwhelming volume.<sup>221</sup>

141. CAISO states that without Cluster 15, load-serving entities have 439 active interconnection requests from Cluster 14 whose interconnection studies are completed. CAISO asserts that these interconnection requests comprise 120,346 MW of capacity from which load-serving entities may choose, and that this is enough generation to meet CAISO's historic peak demand 2.3 times over.<sup>222</sup>

#### **b. Commission Determination**

142. To clarify the applicability of the Order No. 2023 commercial readiness requirements for a transmission provider currently conducting a cluster study process, the Commission explained in Order No. 2023-A that an RTO/ISO transmission provider's

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<sup>220</sup> See CAISO, CAISO eTariff, Proposed app. DD, § 17 (Cluster 15 Unique Procedures) (2.0.0), § 17.1(c).

<sup>221</sup> Filing at 47-48.

<sup>222</sup> *Id.* at 3, 50.



proposed variation to the Order No. 2023 transition process would be evaluated under the independent entity variation standard, and that a transmission provider currently conducting a cluster study process that does not propose to conduct an Order No. 2023 transition process must comply with the remaining requirements of Order No. 2023 other than the transition process. The Commission further stated that those readiness requirements are then to be applied based on the interconnection customer's progress in the queue as of 60 calendar days after the Commission-approved effective date of the transmission provider's compliance filing.<sup>223</sup>

143. We accept CAISO's proposed transition process as an independent entity variation because we find that it is just and reasonable, not unduly discriminatory or preferential, and accomplishes the purposes of Order Nos. 2023 and 2023-A by ensuring an efficient way to prioritize and process interconnection requests, based on how far an interconnection customer has advanced through the interconnection process and on the interconnection customer's commercial readiness.<sup>224</sup> CAISO is proposing procedures to effectuate its Cluster 15 transitional process that align the proposed Order No. 2023 interconnection study schedule with CAISO's transmission planning process, thereby ensuring future clusters can consider new transmission capacity before submitting interconnection requests. CAISO proposes a 60-day window, from October 1, 2024 to December 1, 2024, in which interconnection customers may submit any element of their interconnection request related to initiating an interconnection request that is required but was not previously submitted. We note that this window is almost five months after the CAISO requested effective date of May 17, 2024, and therefore does not strictly conform to the 60-day window required in LGIP *pro forma* section 5.1.2 that begins with the Commission-approved effective date of a transmission provider's Order No. 2023 compliance filing.

144. We find that the large number of interconnection requests in Cluster 15 justifies the need for the five-month interconnection request validation period following CAISO's May 17, 2024 compliance filing effective date.<sup>225</sup> We further note CAISO's comment that without Cluster 15, load-serving entities have 439 active interconnection requests with completed studies that comprise 120,346 MW of capacity from which load-serving

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<sup>223</sup> See Order No. 2023, 184 FERC ¶ 61,054 at P 690; *see also* Order No. 2023-A, 186 FERC ¶ 61,199 at PP 74-75; *pro forma* LGIP § 5.1.2.

<sup>224</sup> See Order No. 2023, 184 FERC ¶ 61,054 at P 856.

<sup>225</sup> Filing at 2. CAISO explains that because its interconnection processes were designed for 75-125 interconnection requests each year, CAISO and the Participating Transmission Owners have been challenged to keep pace with the volume of interconnection requests: 373 in Cluster 14 and 541 in Cluster 15.

entities may choose, and that this is enough generation to meet CAISO's historic peak demand 2.3 times over. Based on these CAISO-specific factors, we find that CAISO has justified its request for an independent entity variation from *pro forma* LGIP section 5.1.2. Specifically, given the volume of existing interconnection requests, we find it reasonable to provide additional time to both existing interconnection customers to comply with the Order No. 2023 requirements and to CAISO to verify all of its existing interconnection customers' compliance with the new Order No. 2023 requirements. Moreover, while this combined process will take longer than 60 days, based on the availability of generation from interconnection requests with completed interconnection studies, we find that the longer validation period is a necessary independent entity variation to accommodate the size of CAISO's interconnection queue. We further find that since the additional time will not impede load-serving entities' fulfillment of their generation needs and will allow CAISO to better synchronize its interconnection queue with its transmission planning process, CAISO's proposed independent entity variation is just and reasonable and accomplishes the purposes of the Order No. 2023-A section 5.1.2 provisions, as CAISO's proposed transition procedure includes a 60-day timeframe within which the interconnection customer must comply with readiness requirements.

## **12. Elimination of Reasonable Efforts**

145. In Order No. 2023, the Commission revised sections 2.2 (Comparability), 3.5.4, 7.4, 8.3 (Interconnection Facilities Study Procedures), and Attachment A to Appendix 3 (formerly Appendix 4) of the *pro forma* LGIP to eliminate the reasonable efforts standard for conducting cluster studies, cluster restudies, facilities studies, and affected system studies by the tariff-specified deadlines.<sup>226</sup> The Commission added new section 3.9 (Penalties for Failure to Meet Study Deadlines) to the *pro forma* LGIP to implement a structure of study delay penalties.<sup>227</sup> Specifically, delays of cluster studies beyond the tariff-specified deadline will incur a penalty of \$1,000 per business day; delays of cluster restudies beyond the tariff-specified deadline will incur a penalty of \$2,000 per business day; delays of affected system studies beyond the tariff-specified deadline will incur a penalty of \$2,000 per business day; and delays of facilities studies beyond the tariff-specified deadline will incur a penalty of \$2,500 per business day. The Commission explained that, among other things, these penalty amounts are intended to incentivize transmission providers to meet study deadlines and that the structure of increasing penalties reflects the progressively greater harm caused by delayed studies at later

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<sup>226</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 962; *see pro forma* LGIP §§ 2.2, 3.5.4, 7.4, 8.3; *see also pro forma* LGIP, app. 3, attach. A.

<sup>227</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 962; *see pro forma* LGIP § 3.9.

interconnection stages.<sup>228</sup> The Commission also specified that the study delay penalty regime contains the following safeguards for transmission providers: (1) no study delay penalties will be assessed until the third cluster study cycle (including any transitional cluster study cycle, but not transitional serial studies) after the Commission-approved effective date of the transmission provider's filing in compliance with Order No. 2023; (2) there will be a 10-business day grace period, such that no study delay penalties will be assessed for a study that is delayed by 10 business days or fewer; (3) deadlines may be extended for a particular study by 30 business days by mutual agreement of the transmission provider and all interconnection customers with interconnection requests in the relevant study; (4) study delay penalties will be capped at 100% of the initial study deposits received for all of the interconnection requests in the relevant study; and (5) transmission providers will have the ability to appeal any study delay penalties to the Commission, with the Commission determining whether good cause exists to grant the relief requested on appeal.<sup>229</sup>

146. The Commission further provided the following features to the study delay penalty structure: (1) transmission providers must distribute study delay penalties to interconnection customers in the relevant study that did not withdraw, or were not deemed withdrawn, from the interconnection queue before the missed study deadline on a pro rata per interconnection request basis to offset their study costs; (2) non-RTO/ISO transmission providers and transmission-owning members of RTOs/ISOs may not recover study delay penalties through transmission rates; (3) RTOs/ISOs may submit an Federal Power Act (FPA) section 205 filing to propose a default structure for recovering study delay penalties and/or to recover the costs of any specific study delay penalties;<sup>230</sup> and (4) transmission providers must post quarterly on their OASIS or other publicly accessible website (a) the total amount of study delay penalties from the previous reporting quarter and (b) the highest study delay penalty paid to a single interconnection customer in the previous reporting quarter.<sup>231</sup> In Order No. 2023-A, the Commission clarified that study delay penalties would be allocated to interconnection customers on a

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<sup>228</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 974-978.

<sup>229</sup> *Id.* P 972.

<sup>230</sup> Under these FPA section 205 filings, the filer must show that any proposal to recover study delay penalties is just, reasonable, and not unduly discriminatory or preferential. *See* 16 U.S.C. § 824d.

<sup>231</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 963.

pro rata basis proportionate to each interconnection customer's final study cost in the relevant study.<sup>232</sup>

**a. CAISO's Compliance Filing**

147. CAISO proposes not to include references to the reasonable efforts standard in its RIS sections 2.2, 3.5.3, 3.6.3, 6.6, and Attachment A to Appendix 4, and proposes RIS section 3.11 to incorporate with minor modifications the revisions adopted in Order Nos. 2023 and 2023-A related to removing the reasonable efforts standard.<sup>233</sup> To reaffirm the CAISO and Participating Transmission Owner commitment to complete studies on time, CAISO states that, as required in Order No. 2023, the RIS-proposed study deadlines do not allow the transmission provider or Participating Transmission Owner to use a reasonable efforts standard in meeting those deadlines.<sup>234</sup> CAISO also proposes to adopt the Commission's *pro forma* LGIP language regarding penalties for late studies. CAISO also explains that because CAISO transmission owners perform the interconnection studies subject to the penalties, CAISO proposes in section 3.11 of the RIS to include a requirement that transmission owners notify CAISO of the penalties assessed, which will allow CAISO to maintain the required penalty data on its website.<sup>235</sup>

**b. Commission Determination**

148. We find that CAISO's proposal not to include references to the reasonable efforts standard in its RIS complies with the requirements of Order Nos. 2023 and 2023-A to eliminate the reasonable efforts standard for conducting cluster studies, cluster restudies, facilities studies, and affected system studies by the tariff-specified deadlines. Additionally, we find that CAISO's proposal to adopt a requirement that transmission

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<sup>232</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 439.

<sup>233</sup> Filing at 35-36; CAISO, CAISO eTariff, Proposed app. KK, § 2 (Scope & Application) (0.0.0), § 2.2; *id.* § 3 (Interconnection Requests) (0.0.0), §§ 3.5.3, 3.6; *id.* § 6 (Cluster Study Process) (0.0.0), § 6.6; *id.* app. 4 (Agreement for the Allocation of Responsibilities With Regard to Generator Interconnection Procs. & Interconnection Study Agreements) (0.0.0), attach. A.

<sup>234</sup> Filing at 36. CAISO states that it and the Participating Transmission Owners treat their study deadlines as firm requirements, and nearly always complete every study on time. CAISO adds that in the few recent instances where slight extensions were necessary due to high volume, CAISO pre-emptively sought Tariff changes under FPA section 205. *Id.* (citing, e.g., *Cal. Indep. Sys. Operator Corp.*, 176 FERC ¶ 61,207 (2021)).

<sup>235</sup> *Id.*

owners notify CAISO of any penalties complies with the requirements of Order Nos. 2023 and 2023-A by allowing CAISO to maintain the required penalty data on its OASIS website.

### **13. Affected System Study Process and Modeling Requirements**

149. In Order No. 2023, the Commission adopted an affected system study process and added several related definitions to the *pro forma* LGIP.<sup>236</sup>

150. The Commission revised section 3.6 (Coordination with Affected Systems) and adopted section 3.6.1 (Initial Notification) of the *pro forma* LGIP, which requires the transmission provider to notify the affected system operator within 10 business days of the first instance of an identified potential affected system impact, which may occur at the completion of either the cluster study or the cluster restudy.<sup>237</sup>

151. The Commission also adopted several requirements to establish an affected system process under *pro forma* LGIP section 9 (Affected System Study), which pursuant to *pro forma* LGIP section 9.1 (Applicability) applies to the transmission provider when it is acting as the affected system transmission provider (i.e., when the transmission provider is studying the impacts on its own transmission system of proposed interconnections to other transmission providers' transmission systems).<sup>238</sup> First, the Commission adopted section 9.2 (Response to Initial Notification) of the *pro forma* LGIP, which requires the affected system transmission provider to respond to notification of a potential affected system impact in writing within 20 business days, indicating whether it intends to conduct an affected system study.<sup>239</sup> Section 9.2 also requires that, within 15 business days of the affected system transmission provider's affirmative response of its intent to conduct an affected system study, the affected system transmission provider must share a non-binding good faith estimate of the cost and schedule to complete the affected system study.

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<sup>236</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 1110, 1112; *see pro forma* LGIP § 1.

<sup>237</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1119; *see pro forma* LGIP §§ 3.6, 3.6.1.

<sup>238</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1113; *see pro forma* LGIP § 9.1.

<sup>239</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1120; *see pro forma* LGIP § 9.2.

152. The Commission next adopted section 9.3 (Affected System Queue Position) of the *pro forma* LGIP.<sup>240</sup> Under section 9.3, the interconnection requests of affected system interconnection customers that have executed an affected system study agreement will be higher-queued than the interconnection requests of those host system interconnection customers that have not yet received their cluster study results, and lower-queued than those interconnection customers that have already received their cluster study results. All affected system interconnection requests studied within the same affected system cluster will be equally queued.

153. The Commission next adopted section 9.4 (Affected System Study Agreement/Multiparty Affected System Study Agreement) of the *pro forma* LGIP to require that the transmission provider tender the affected system study agreement within 10 business days of sharing the schedule for the study with the affected system interconnection customers.<sup>241</sup> Section 9.4 also requires the affected system interconnection customer to compensate the affected system transmission provider for the actual costs of the affected system study, and the difference between the affected system study deposit and actual cost of the affected system study will be detailed in an invoice and paid by or refunded to the affected system interconnection customer within 30 calendar days of the receipt of such invoice.<sup>242</sup> An affected system interconnection customer's failure to pay the difference between these amounts will result in loss of that affected system interconnection customer's affected system queue position. Section 9.4 also requires that the affected system transmission provider notify the host transmission provider of the affected system interconnection customer's breach of its obligations under this section, should such breach occur.<sup>243</sup>

154. The Commission next adopted section 9.5 (Execution of Affected System Study Agreement/Multiparty Affected System Study Agreement) of the *pro forma* LGIP, which provides the affected system interconnection customer with 10 business days from the date of receipt of the affected system study agreement to execute and deliver it to the affected system transmission provider.<sup>244</sup> Section 9.5 also provides that, if the affected system interconnection customer does not provide all required technical data when it delivers the affected system study agreement, the affected system transmission provider shall notify the affected system interconnection customer of the deficiency within five

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<sup>240</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1138; *see pro forma* LGIP § 9.3.

<sup>241</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1154; *see pro forma* LGIP § 9.4.

<sup>242</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1157.

<sup>243</sup> *Id.* P 1159.

<sup>244</sup> *Id.* P 1158; *see pro forma* LGIP § 9.5.

business days of the receipt of the affected system study agreement, and the affected system interconnection customer has 10 business days to cure the deficiency after receipt of such notice (provided that the deficiency does not include failure to deliver the executed affected system study agreement or deposit).

155. The Commission next adopted section 9.6 (Scope of Affected System Study) of the *pro forma* LGIP, which requires the affected system study to consider the base case, as well as all higher-queued generating facilities on the affected system transmission provider's transmission system, and to consist of a power flow, stability, and short circuit analysis.<sup>245</sup> Section 9.6 also requires the affected system study to provide a list of affected system network upgrades that are required because of the affected system interconnection customer's proposed interconnection, a non-binding good faith estimate of cost responsibility, and a non-binding good faith estimated time to construct. The affected system study may consist of a system impact study, a facilities study, or some combination thereof.

156. The Commission next adopted section 9.7 (Affected System Study Procedures) of the *pro forma* LGIP, which requires clustering of affected system interconnection requests for study purposes where multiple interconnection requests that are part of a single cluster in the host system's cluster study process cause the need for an affected system study.<sup>246</sup> Section 9.7 also requires the affected system transmission provider to complete the affected system study and provide the affected system interconnection customer with affected system study results within 150 calendar days after receipt of the affected system study agreement. Section 9.7 also requires the affected system transmission provider to provide the affected system study report to the host transmission provider at the same time it provides the report to the affected system interconnection customer. The affected system transmission provider must notify the affected system interconnection customer that an affected system study will be late.<sup>247</sup> Lastly, *pro forma* LGIP section 9.7 requires affected system transmission providers to study all affected

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<sup>245</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1160; *see pro forma* LGIP § 9.6.

<sup>246</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1133; *see pro forma* LGIP § 9.7.

<sup>247</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1135.

system interconnection requests using Energy Resource Interconnection Service (ERIS)<sup>248</sup> modeling standards.<sup>249</sup>

157. The Commission added a new section 11.2.1 (Delay in LGIA Execution, or Filing Unexecuted, to Await Affected System Study Report) to the *pro forma* LGIP.<sup>250</sup> Under this section, if the interconnection customer does not receive its affected system study results before the deadline in its host system for LGIA execution, or the deadline to request that the LGIA be filed unexecuted, the host transmission provider must, at the interconnection customer's request, delay the deadline for the interconnection customer to finalize its LGIA. The interconnection customer will have 30 calendar days after receipt of the affected system study report to execute the LGIA, or request that the LGIA be filed unexecuted. Additionally, if the interconnection customer prefers to proceed to the execution of its LGIA, or request that the LGIA be filed unexecuted, before it has received its affected system study results, it may notify the host transmission provider of its intent to proceed with the execution of the LGIA, or request that the LGIA be filed unexecuted.<sup>251</sup> If the host transmission provider determines that further delay to the LGIA execution date would cause a material impact on the cost or timing of an equal- or lower-queued interconnection customer, the transmission provider must notify the relevant interconnection customer of such impact and establish that the new deadline is 30 calendar days after such notice is provided.

158. The Commission adopted section 9.8 (Meeting with Transmission Provider) of the *pro forma* LGIP, which requires the affected system transmission provider and the affected system interconnection customer to meet within 10 business days of the affected system transmission provider tendering the affected system study report to the affected system interconnection customer.<sup>252</sup>

159. The Commission adopted section 9.9 (Affected System Cost Allocation) of the *pro forma* LGIP, which requires the allocation of affected system network upgrade

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<sup>248</sup> ERIS is an interconnection service that allows the interconnection customer to connect its generating facility to the transmission provider's transmission system to be eligible to deliver the generating facility's electric output using the existing firm or non-firm capacity of the transmission provider's transmission system on an as available basis. ERIS in and of itself does not convey transmission service. *Pro forma* LGIP § 1.

<sup>249</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1276.

<sup>250</sup> *Id.* P 1123; *see pro forma* LGIP § 11.2.1.

<sup>251</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1124.

<sup>252</sup> *Id.* P 1169; *see pro forma* LGIP § 9.8.



costs using a proportional impact method in accordance with *pro forma* LGIP section 4.2.1(1)(b).<sup>253</sup>

160. The Commission adopted section 9.10 (Tender of Affected System Facilities Construction Agreement/Multiparty Affected System Facilities Construction Agreement) of the *pro forma* LGIP.<sup>254</sup> Under section 9.10, an affected system transmission provider must tender an affected system facilities construction agreement to the affected system interconnection customer within 30 calendar days of providing the affected system study report. The affected system transmission provider must provide 10 business days after receipt of the affected system facilities construction agreement for the affected system interconnection customer to execute the agreement or have the affected system transmission provider file it unexecuted with the Commission.

161. The Commission adopted section 9.11 (Restudy) of the *pro forma* LGIP to include a maximum 60-calendar day restudy period for any affected system restudies.<sup>255</sup> Section 9.11 also adopts a 30-calendar day notification requirement for the affected system transmission provider to notify the affected system interconnection customer of the need for affected system restudy upon discovery of such need.<sup>256</sup>

162. In Order No. 2023-A, the Commission clarified that an affected system transmission provider may pause an affected system study that is planned or in progress if the relevant host transmission provider decides to conduct a cluster restudy. The Commission added *pro forma* LGIP: (1) section 3.6.2 (Notification of Cluster Restudy) to require the host transmission provider to notify any relevant affected system operators of a cluster restudy at the same time it notifies the interconnection customers in the cluster restudy; and (2) section 3.6.3 (Notification of Cluster Restudy Completion) to require the host transmission provider to notify the affected system operator of the completion of the cluster restudy and of a potential affected system impact caused by an interconnection request within 10 business days of the completion of the cluster restudy.<sup>257</sup>

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<sup>253</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1149; *see pro forma* LGIP § 9.9.

<sup>254</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1165; *see pro forma* LGIP § 9.10.

<sup>255</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1170; *see pro forma* LGIP § 9.11.

<sup>256</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1171.

<sup>257</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at PP 498, 500; *see pro forma* LGIP §§ 3.6.2, 3.6.3.

163. The Commission also added *pro forma* LGIP section 9.2.2 (Response to Notification of Cluster Restudy) to allow the affected system transmission provider five business days from receiving notification of the cluster restudy to send a written notification to the relevant affected system interconnection customers and the host transmission provider if it intends to delay commencement or completion of a planned or in-progress affected system study until after the completion of the cluster restudy.<sup>258</sup> The Commission revised *pro forma* LGIP section 9.5 to remove the requirement for an affected system interconnection customer to execute and return its previously received affected system study agreement and submit its affected system study deposit if the affected system transmission provider decides to delay the affected system study, pursuant to *pro forma* LGIP section 9.2.2.<sup>259</sup>

**a. CAISO's Compliance Filing**

164. CAISO proposes language in Tariff Appendix A (Definitions) and RIS sections 3.7 (Coordination with Affected Systems), 13.2.1 (Delay in LGIA Execution, or Filing Unexecuted, to Await Affected System Study Report), and 14.5 (CAISO as an Affected System) under the independent entity variation standard to implement with modifications the *pro forma* revisions related to the affected system study process that the Commission adopted in Order Nos. 2023 and 2023-A.<sup>260</sup>

165. To account for instances in which CAISO Interconnection Customers impact other transmission providers (*pro forma* LGIP Section 3.6), CAISO proposes RIS sections 3.7 and 13.2.1, with modifications to account for the prevalence of non-jurisdictional affected systems.<sup>261</sup> Generally, CAISO proposes to use a process wherein it will notify potentially affected systems within 10 business days of the commercial readiness deposit arising after the cluster study. CAISO further proposes to maintain its current Commission-

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<sup>258</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 498; *see pro forma* LGIP § 9.2.2.

<sup>259</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 499; *see pro forma* LGIP § 9.5.

<sup>260</sup> CAISO, CAISO eTariff, Proposed app. A, Affected System Facilities Construction Agreement (0.0.0); *id.* Affected System Interconnection Customer (0.0.0); *id.* Affected System Network Upgrades (0.0.0); *id.* Affected System Queue Position (0.0.0); *id.* Affected System Study (0.0.0); *id.* Affected System Study Agreement (0.0.0); *id.* Affected System Study Report (0.0.0); *id.* Proposed app. KK, app. 12 (Multiparty Affected System Study Agreement) (0.0.0); *id.* app. 14 (Multiparty Affected System Facilities Construction Agreement) (0.0.0); *id.*, Proposed app. KK, § 14 (Constr. & Neighboring Sys. Impacts) (0.0.0), §§ 14.5 to .11.

<sup>261</sup> CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), §§ 3.7, 3.7.1; *id.* § 13 (Generator Interconnection Agreement) (0.0.0), § 13.2.1.

approved practice whereby the potentially affected system has 60 days to review the cluster study results for the projects that may affect it and advise CAISO whether the affected system should be considered an “Identified Affected System” that may require an affected system study.<sup>262</sup>

166. More specifically, CAISO proposes modifications from *pro forma* LGIP section 3.6 in RIS section 3.7 to account for the prevalence of non-jurisdictional neighboring transmission providers that provide, for example: (1) that CAISO will coordinate to the extent possible the conduct of any studies required to determine the impact of the interconnection request on affected systems with affected system operators, (2) examples of the manner by which it and its interconnection customers will cooperate with affected system transmission providers, (3) a requirement, if needed, for the interconnection customer to sign separate study agreements with the identified affected system and pay for necessary studies, and (4) a requirement for the identified affected systems to cooperate with CAISO in all matters related to their determination of modifications to identified affected systems.<sup>263</sup> CAISO also explains that it has not included sections 3.6.2 and 3.6.3 of the *pro forma* LGIP because, according to CAISO, its cluster restudy is a given, and affected systems already receive all new study/restudy results.<sup>264</sup>

167. Additionally, because of the prevalence of non-jurisdictional neighboring transmission providers that are not required to adhere to the affected system study timelines of the *pro forma* LGIP, CAISO proposes to cap the length of time by which an interconnection customer may delay the execution of its LGIA because of affected system study delays at 210 days, which, CAISO explains, represents the length of time a jurisdictional transmission provider would have to complete the affected system studies, plus the 30-day period provided in *pro forma* LGIP Section 11.2.1 (Delay in LGIA Execution, or Filing Unexecuted, to Await Affected System Study Report) for interconnection customers to delay executing the LGIA or requesting the LGIA to be filed an unexecuted.<sup>265</sup>

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<sup>262</sup> Filing at 37-39 (citing CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.7.1).

<sup>263</sup> See CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.7.

<sup>264</sup> Filing at 38 n.178.

<sup>265</sup> *Id.* at 23-24.

168. Finally, for situations in which CAISO is the affected system (*pro forma* LGIP Section 9), CAISO proposes RIS section 14.5.<sup>266</sup> CAISO explains that proposed RIS Section 14.5 contains only minor modifications to the *pro forma* affected system study process provisions to reflect that in CAISO, the Participating Transmission Owners conduct affected system studies, not CAISO, and to reflect that CAISO uses the term “Energy Only,” rather than the term “ERIS.”<sup>267</sup>

**b. Commission Determination**

169. We find that CAISO’s proposed affected system study process and modeling language in its RIS Appendix A and RIS section 14.5 (CAISO as an Affected System) complies with the requirements of Order Nos. 2023 and 2023-A. We find that, in these sections, CAISO adopts the *pro forma* LGIP language with CAISO-specific modifications and with modifications to account for the prevalence of non-jurisdictional transmission providers neighboring CAISO. These modifications clarify the application of the requirements of Order No. 2023 under CAISO’s specific circumstances. We therefore find that the proposed independent entity variations are just and reasonable and not unduly discriminatory or preferential, and accomplish the purposes of Order Nos. 2023 and 2023-A because CAISO adopts the Commission’s *pro forma* language with only CAISO-specific modifications and modifications to account for non-jurisdictional transmission providers.

170. We accept CAISO’s proposed independent entity variation in RIS section 3.7.1 (Timing for Identification of Identified Affected Systems), in compliance with *pro forma* LGIP sections 3.6.1 (Initial Notification), 3.6.2 (Notification of Cluster Restudy) and 3.6.3 (Notification of Cluster Restudy Completion), because we find the proposed variation is just and reasonable and not unduly discriminatory or preferential, and accomplishes the purposes of Order Nos. 2023 and 2023-A.<sup>268</sup> By committing to notify potentially affected systems after an interconnection customer has posted its additional commercial readiness deposit following the cluster study, CAISO commits to notifying potentially affected systems on a timeline that is consistent with what the Commission required in Order No. 2023. Regarding CAISO’s compliance with *pro forma* LGIP sections 3.6.2 and 3.6.3, we accept CAISO’s explanation that neighboring affected

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<sup>266</sup> See CAISO, CAISO eTariff, Proposed app. KK, § 14 (Constr. & Neighboring Sys. Impacts) (0.0.0), § 14.5.

<sup>267</sup> Filing at 37.

<sup>268</sup> *Id.* PP 1119-1122, 1132, 1153.

system transmission providers will already have the results of CAISO's cluster studies and cluster restudies.<sup>269</sup>

171. We also find that CAISO's proposed affected system study process and modeling language in its RIS section 3.7 (Coordination with Affected Systems) complies with the requirements of Order Nos. 2023 and 2023-A. Given the prevalence of non-jurisdictional transmission providers that neighbor CAISO, we find that the modifications to these sections are just and reasonable and not unduly discriminatory or preferential, and that they accomplish the purposes of the final rule, and thus meet the independent entity variation standard. As CAISO notes, there is no guarantee that non-jurisdictional neighbors will comply with the Commission's *pro forma* LGIP requirements. Under these circumstances, CAISO commits to coordinating with affected systems in a manner consistent with the *pro forma* requirements.

172. Finally, we accept CAISO's proposed RIS section 13.2.1 (Delay in LGIA Execution, or Filing Unexecuted, to Await Affected System Study Report) in compliance with *pro forma* LGIP section 11.2.1 under the independent entity variation standard. We agree with CAISO that, given the prevalence of non-jurisdictional neighboring transmission providers, there is no guarantee that such non-jurisdictional neighboring transmission providers will complete the affected system studies according to the timeline in the *pro forma* LGIP or CAISO Tariff. Therefore, we find that CAISO's proposal to limit the number of days by which an interconnection customer may extend the deadline to finalize the GIA to 210 calendar days after the tendering of the GIA and appendices is just and reasonable and not unduly discriminatory or preferential and accomplishes the purpose of Order Nos. 2023 and 2023-A because it ensures timely completion of the affected system study process.<sup>270</sup>

#### **14. Affected System *Pro Forma* Agreements**

173. In Order No. 2023, the Commission adopted several *pro forma* agreements to improve the efficiency and transparency of the interactions among the parties during the affected system study process. The Commission first adopted a *pro forma* affected system study agreement in new Appendix 9 (Two-Party Affected System Study Agreement) of the *pro forma* LGIP and a *pro forma* multiparty affected system study agreement in new Appendix 10 (Multiparty Affected System Study Agreement) of the *pro forma* LGIP.<sup>271</sup> These *pro forma* affected system study agreements stipulate how to

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<sup>269</sup> Filing at 38 n.178.

<sup>270</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1131.

<sup>271</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 1171, 1232; *see pro forma* LGIP, apps. 9, 10.

study the impact of interconnecting generating facilities on an affected system to identify network upgrades needed to accommodate the interconnection request. The Commission next adopted a *pro forma* affected system facilities construction agreement in new Appendix 11 (Two-Party Affected System Facilities Construction Agreement) of the *pro forma* LGIP and a *pro forma* multiparty affected system facilities construction agreement in new Appendix 12 (Multiparty Affected System Facilities Construction Agreement) of the *pro forma* LGIP.<sup>272</sup> These *pro forma* affected system facilities construction agreements standardize the terms and conditions regarding construction of affected system network upgrades.

174. In Order No. 2023-A, the Commission removed articles 3.1.2.2 (Recommencing of Work) and 3.1.2.3 (Right to Suspend Due to Default) from the Two-Party and Multiparty Affected System Facilities Construction Agreement (*pro forma* LGIP appendices 11 and 12, respectively) to ensure consistency between the *pro forma* affected system facilities construction agreements and the *pro forma* LGIA.<sup>273</sup>

**a. CAISO's Compliance Filing**

175. CAISO proposes to add Appendices 11, 12, 13, and 14 to its RIS to incorporate with minor modifications the *pro forma* two-party affected system study agreement, *pro forma* multiparty affected system study agreement, *pro forma* two-party affected system facilities construction agreement, and *pro forma* multiparty affected system facilities construction agreement, respectively, adopted in Order Nos. 2023 and 2023-A.<sup>274</sup> CAISO further proposes revisions to its Tariff Appendix A to define the Affected System Facilities Construction Agreement and Affected System Study Agreement with minor CAISO-specific modifications.<sup>275</sup>

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<sup>272</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1233; *see pro forma* LGIP, apps. 10, 11.

<sup>273</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 533; *see pro forma* LGIP, apps. 10, 11.

<sup>274</sup> CAISO, CAISO eTariff, Proposed app. KK, app. 11 (Two-Party Affected Sys. Study Agreement) (0.0.0); *id.* app. 12 (Multiparty Affected Sys. Study Agreement) (0.0.0); *id.* app. 13 (Two-Party Affected Sys. Facilities Constr. Agreement) (0.0.0); *id.* app. 14 (Multiparty Affected Sys. Facilities Constr. Agreement) (0.0.0).

<sup>275</sup> CAISO, CAISO eTariff, Proposed app. A, Affected System Facilities Construction Agreement (0.0.0.); *id.* Affected System Study Agreement (0.0.0).

**b. Commission Determination**

176. We find that CAISO's proposed revisions to add Appendices 11, 12, 13, and 14 to its RIS comply with the requirements of Order Nos. 2023 and 2023-A because the proposed Appendices adopt the *pro forma* LGIP Appendices 9, 10, 11, and 12 with only minor CAISO-specific modifications.<sup>276</sup>

177. Finally, regarding CAISO's revisions to its Tariff Appendix A definitions to add the terms Affected System Facilities Construction Agreement and Affected System Study Agreement, we find that these revisions comply with the requirements of Order Nos. 2023 and 2023-A and are therefore acceptable because CAISO adopts the *pro forma* affected system agreements with only CAISO-specific modifications.<sup>277</sup>

178. However, we find that CAISO has failed to add definitions to its Tariff to define Multiparty Affected System Facilities Construction Agreement and Multiparty Affected System Study Agreement. Accordingly, we direct CAISO to submit, within 60 days of the date of this order, a further compliance filing adding those terms to its Tariff.

**15. Co-Located Generating Facilities**

179. In Order No. 2023, the Commission revised *pro forma* LGIP section 3.1.2 to require transmission providers to allow more than one generating facility to co-locate on a shared site behind a single point of interconnection and share a single interconnection request.<sup>278</sup> The Commission clarified that interconnection customers have the choice to structure their interconnection requests for co-located generating facilities according to their preference (i.e., as separate interconnection requests or as a shared interconnection request) and that Order No. 2023 does not require interconnection customers to share a single interconnection request for multiple generating facilities located on the same site.<sup>279</sup> The Commission also clarified that co-located generating facilities can be owned by a single interconnection customer with multiple generating facilities sharing a site, or by multiple interconnection customers that have a contract or other agreement that allows for shared land use.<sup>280</sup>

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<sup>276</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 1192-1193, 1231-1232.

<sup>277</sup> *Id.* PP 1192-1193, 1231-1232.

<sup>278</sup> *Id.* P 1346; *see pro forma* LGIP § 3.1.2.

<sup>279</sup> Order No. 2023, 184 FERC ¶ 61,054 at PP 1351-1352.

<sup>280</sup> *Id.* P 1355.

**a. CAISO's Compliance Filing**

180. CAISO proposes language in section 3.1 of its RIS to incorporate with minor modification the *pro forma* revisions related to co-located generating facilities with shared interconnection requests adopted in Order Nos. 2023 and 2023-A.<sup>281</sup> Specifically, CAISO proposes to replace the generic terms “Transmission Provider” and “LGIP” with “CAISO” and “RIS,” and CAISO uses the term “Generating Unit” in lieu of the *pro forma* term “Generating Facility.”

**b. Commission Determination**

181. We find that CAISO's proposed language concerning co-located generating facilities complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission's *pro forma* LGIP provisions with minor modifications to provide additional CAISO-specific terminology, as noted above.

**16. Revisions to the Modification Process to Require Consideration of Generating Facility Additions**

182. In Order No. 2023, the Commission revised section 4.4.3 of the *pro forma* LGIP to require transmission providers to evaluate the proposed addition of a generating facility at the same point of interconnection prior to deeming such an addition a material modification, if the addition does not change the originally requested interconnection service level.<sup>282</sup> The Commission found that automatically deeming a request to add a generating facility to an existing interconnection request to be a material modification without such evaluation creates a significant barrier to access to the transmission system and renders existing interconnection processes unjust and unreasonable.<sup>283</sup>

183. The Commission clarified that interconnection customers may continue to request changes to proposed generating facilities at any time in the interconnection process; however, transmission providers are only required to evaluate whether a request to add a generating facility to an existing interconnection request is material if the request is submitted before the interconnection customer returns the executed facilities study agreement to the transmission provider. Once the executed facilities study agreement is returned, the transmission provider may decide to automatically treat requests to add a generating facility to an existing interconnection request as material modifications

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<sup>281</sup> Filing at 39; CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.1.

<sup>282</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1406; *see pro forma* LGIP § 4.4.3.

<sup>283</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1407.



without review.<sup>284</sup> The Commission also created an exception from these requirements for transmission providers that employ fuel-based dispatch assumptions.<sup>285</sup>

**a. CAISO's Compliance Filing**

184. CAISO proposes in RIS section 6.7.2.2 to describe the types of interconnection request modifications that it proposes to allow. CAISO states that its existing interconnection process allows interconnection customers to propose modifications swapping or adding additional generation prior to commercial operation if the proposed modification does not increase interconnection service capacity, result in a material modification, or substantially change the reliability characteristics of the generator. Nevertheless, CAISO proposes to include the Commission's *pro forma* language on these issues, and proposes to specify which modifications are permissible before the cluster study agreement and which modifications are permissible before the interconnection facilities study to align with Order No. 2023's cluster study process. CAISO has also included language in its proposed RIS section 6.7.2.8 regarding additional generation modifications, which provides that along with the Participating Transmission Owner, CAISO is only required to evaluate whether a request to add a generating facility to an interconnection request is material if the request is submitted prior to the return of the executed facilities study agreement.<sup>286</sup>

**b. Commission Determination**

185. We find that CAISO's proposed language concerning the modification process complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission's *pro forma* LGIP provisions with only CAISO-specific modifications.

**17. Availability of Surplus Interconnection Service**

186. In Order No. 2023, the Commission revised section 3.3.1 (Surplus Interconnection Service Request) of the *pro forma* LGIP to require transmission providers to allow interconnection customers to access the surplus interconnection service process once the original interconnection customer has an executed LGIA or requests the filing of an unexecuted LGIA.<sup>287</sup> The Commission found that this reform will enable interconnection

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<sup>284</sup> *Id.* PP 1409-1410.

<sup>285</sup> *Id.* P 1411.

<sup>286</sup> Filing at 40; CAISO, CAISO eTariff, Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), § 6.7.2.8.

<sup>287</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1436; *see pro forma* LGIP § 3.3.1.

customers with unused interconnection service to let other generating facilities use that interconnection service earlier than is currently allowed and, therefore, increase overall efficiency of the interconnection queue and in turn ensure just and reasonable rates.<sup>288</sup> The Commission clarified that this reform does not modify how the surplus interconnection service process is conducted, but rather addresses when a request for surplus interconnection service may be submitted.<sup>289</sup> The Commission further clarified that the original interconnection customer must have an LGIA in place, either executed or requested to be filed unexecuted with the Commission, prior to the transmission provider tendering any LGIA for surplus interconnection service.<sup>290</sup>

**a. CAISO's Compliance Filing**

187. CAISO proposes language in RIS section 3.4 (Surplus Interconnection Service) and revisions to Appendix DD section 3.4 (Surplus Interconnection Service) that adopt, with limited CAISO-specific changes, the revisions to the *pro forma* LGIP to allow interconnection customers to access the surplus interconnection service process once the original customer has executed, or requests the filing of an unexecuted, GIA.<sup>291</sup>

**b. Commission Determination**

188. We find that CAISO's proposed language concerning surplus interconnection service complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the *pro forma* LGIP with only CAISO-specific changes, including replacing "LGIA" with "GIA" and replacing "Transmission Provider" with "CAISO and Participating TO" to reflect CAISO's terminology and processes.

**18. Operating Assumptions for Interconnection Studies**

189. In Order No. 2023, the Commission revised sections 3.1.2, 3.2.1.2 (The Study), 3.2.2.2 (The Study), 3.3.1, 3.4.2, 4.4.3, 7.3, 8.2 (Scope of Interconnection Facilities Study), and Appendix 1 (Interconnection Request for a Large Generating Facility) of the *pro forma* LGIP and article 17.2 (Violation of Operating Assumptions for Generating Facilities) and Appendix H (Operating Assumptions for Generating Facility) of the *pro forma* LGIA to require transmission providers, at the request of the interconnection

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<sup>288</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1437.

<sup>289</sup> *Id.* P 1447.

<sup>290</sup> *Id.* P 1445.

<sup>291</sup> Filing at 40-41; CAISO, CAISO eTariff, Proposed app. KK, § 3 (Interconnection Requests) (0.0.0), § 3.4.

customer, to use operating assumptions in interconnection studies that reflect the proposed charging behavior of electric storage resources (whether standalone, co-located generating facilities, or part of a hybrid generating facility)—i.e., whether the interconnecting generating facility will or will not charge during peak load conditions—unless good utility practice, including applicable reliability standards, otherwise requires the use of different operating assumptions.<sup>292</sup> The Commission required interconnection customers to provide the proposed operating assumptions in the initial interconnection request.<sup>293</sup> The Commission also required that, if a transmission provider finds the interconnection customer's proposed operating assumptions in conflict with good utility practice, the transmission provider must provide the interconnection customer with a written explanation of why the operating assumptions are insufficient or inappropriate no later than 30 calendar days before the end of the customer engagement window and allow the interconnection customer to resubmit the operating assumptions at least 10 calendar days before the end of the customer engagement window.<sup>294</sup> Finally, the Commission added article 17.2 to the *pro forma* LGIA to describe a violation of operating assumptions and Appendix H to the *pro forma* LGIA as the location for the interconnection customer to memorialize its operating assumptions.<sup>295</sup>

**a. CAISO's Compliance Filing**

190. CAISO proposes revisions to the CAISO Tariff, Appendix A (Definitions) and language in Appendix KK RIS sections 2.4.3.1, 3.1, 3.4, 3.5.1, 6.2, 6.3.2.1, 6.7.2.2, 8.1.2, 14, as well as article 17.2 and Appendix I of its *pro forma* LGIA, to incorporate, with CAISO-specific modifications, the *pro forma* revisions relating to operating assumptions

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<sup>292</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1509; *see pro forma* LGIP §§ 3.1.2, 3.2.1.2, 3.2.2.2, 3.3.1, 3.4.2, 4.4.3, 7.3, 8.2, app.1; *see also pro forma* LGIA art. 17.2, app. H.

<sup>293</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1520; *see pro forma* LGIP § 3.4.2(v).

<sup>294</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1511.

<sup>295</sup> *Id.* P 1521; *see pro forma* LGIA art. 17.2, app. H.

adopted in Order Nos. 2023 and 2023-A.<sup>296</sup> CAISO states that it proposes to comply with all the requirements regarding operating assumptions.<sup>297</sup>

**b. Commission Determination**

191. We find that CAISO's proposed language concerning operating assumptions complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the Commission's *pro forma* LGIP and *pro forma* LGIA provisions with only CAISO-specific modifications.

**19. Incorporating the Enumerated Alternative Transmission Technologies**

192. In Order No. 2023, the Commission revised section 7.3 of the *pro forma* LGIP, and sections 3.3.6 and 3.4.10 of the *pro forma* SGIP.<sup>298</sup> The Commission required transmission providers to evaluate the following enumerated list of alternative transmission technologies: static synchronous compensators, static VAR compensators, advanced power flow control devices, transmission switching, synchronous condensers, voltage source converters, advanced conductors, and tower lifting.<sup>299</sup> The Commission revised *pro forma* LGIP section 7.3 to require transmission providers to evaluate the list of alternative transmission technologies enumerated in Order No. 2023 during the cluster study, including any restudies, of the generator interconnection process in all instances (i.e., for all interconnection customers in a cluster), without the need for a request from an interconnection customer. The Commission required transmission providers to evaluate each alternative transmission technology listed in *pro forma* LGIP section 7.3 and to determine, in the transmission provider's sole discretion, whether it should be used, consistent with good utility practice, applicable reliability standards, and other applicable regulatory requirements. Finally, the Commission required transmission providers to include, in the *pro forma* LGIP cluster study report, an explanation of the

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<sup>296</sup> CAISO, CAISO eTariff, Proposed app. KK, § 2 (Scope and Application) (0.0.0), § 2.4.3.1; *id.* § 3 (Interconnection Requests) (0.0.0), §§ 3.1, 3.4, 3.5.1; *id.* § 6 (Cluster Study Process) (0.0.0), §§ 6.2, 6.3.2.1, 6.7.2.2; *id.* § 8 (Interconnection Facilities Study & TP Deliverability Allocation Processes) (0.0.0), § 8.1.2; *id.* § 14 (Constr. & Neighboring Sys. Impacts) (0.0.0); *id.* Proposed app. LL, art. 17 (Default) (0.0.0), § 17.2; *id.* app. I (Operating Assumptions for Generating Facility) (0.0.0).

<sup>297</sup> Filing at 41-42.

<sup>298</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1578; *see pro forma* LGIP § 7.3; *see also pro forma* SGIP §§ 3.3.6, 3.4.10.

<sup>299</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1578.

results of the evaluation of the enumerated alternative transmission technologies for feasibility, cost, and time savings as an alternative to a traditional network upgrade.

193. The Commission revised sections 3.3.6 and 3.4.10 of the *pro forma* SGIP, consistent with the *pro forma* LGIP requirement, to require transmission providers to evaluate the enumerated alternative transmission technologies when performing interconnection studies for small generating facilities, without the need for a request from an interconnection customer.<sup>300</sup> The Commission required such evaluations to occur during the *pro forma* SGIP feasibility study and system impact study of the generator interconnection process. The Commission found that it is appropriate for these evaluations to occur during the relevant *pro forma* SGIP studies where network upgrades are identified, consistent with the *pro forma* LGIP requirement. The Commission required transmission providers to evaluate each alternative transmission technology listed in *pro forma* SGIP sections 3.3.6 and 3.4.10 and determine, in the transmission provider's sole discretion, whether it should be used, consistent with good utility practice, applicable reliability standards, and other applicable regulatory requirements.

194. In Order No. 2023-A, the Commission added the definitions of “applicable reliability standards” and “applicable laws and regulations” to the *pro forma* SGIP, added the term “applicable reliability standards” to the performance standards in *pro forma* LGIP section 7.3 and *pro forma* SGIP sections 3.3.6 and 3.4.10, and replaced “other applicable regulatory requirements” with the term “applicable laws and regulations” in *pro forma* LGIP section 7.3 and *pro forma* SGIP sections 3.3.6 and 3.4.10.<sup>301</sup> Additionally, the Commission revised *pro forma* LGIP section 7.3 and *pro forma* SGIP sections 3.3.6 and 3.4.10 to clarify that good utility practice, applicable reliability standards, and applicable laws and regulations apply to both the transmission provider's evaluation of the enumerated alternative transmission technologies and the determination to use the technology.<sup>302</sup>

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<sup>300</sup> *Id.* P 1580.

<sup>301</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at PP 623-624; *see pro forma* LGIP § 7.3; *see also pro forma* SGIP §§ 3.3.6, 3.4.10, attach. 1.

<sup>302</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at PP 625-627; *see pro forma* LGIP § 7.3; *see also pro forma* SGIP §§ 3.3.6, 3.4.10.

**a. CAISO's Compliance Filing**

195. CAISO proposes language in section 6.2 of its RIS to incorporate the framework for the enumerated alternative transmission technologies adopted in Order Nos. 2023 and 2023-A with CAISO-specific modifications.<sup>303</sup> Additionally, CAISO states that it does not include Commission's alternative transmission technology revisions to the *pro forma* SGIP because CAISO does not have an SGIP.

196. CAISO does not propose language in its RIS relating to the alternative transmission technology evaluation standards that the Commission added to *pro forma* LGIP section 7.3 in Order No. 2023-A, in relevant part, in the following manner: "Transmission Provider shall *evaluate each identified alternative transmission technology and* determine whether the above technologies should be used, consistent with Good Utility Practice, *Applicable Reliability Standards*, and [other applicable regulatory requirements] *Applicable Laws and Regulations*."<sup>304</sup>

**b. Commission Determination**

197. We find that CAISO's proposed language in its RIS relating to alternative transmission technologies partially complies with the requirements of Order Nos. 2023 and 2023-A. CAISO adopts most of the *pro forma* LGIP language with only CAISO-specific modifications.<sup>305</sup> We further accept CAISO's omission of the Commission's alternative transmission technology revisions to the *pro forma* SGIP, because CAISO does not have an SGIP.<sup>306</sup>

198. However, we find that CAISO has failed to include the language in *pro forma* LGIP section 7.3 relating to the alternative transmission technology evaluation standards. Accordingly, we direct CAISO to submit, within 60 days of the date of this order, a further compliance filing that either justifies the proposed omission of this language under the independent entity variation standard or adopts without modification the Commission's language in *pro forma* LGIP section 7.3.

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<sup>303</sup> CAISO, CAISO eTariff, Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), § 6.2.

<sup>304</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 626.

<sup>305</sup> CAISO, CAISO eTariff, Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), § 6.2.

<sup>306</sup> Filing, attach. D (Informational Table of Revisions Based on Existing GIDAP) at 13.

**20. Modeling and Ride-Through Requirements for Non-Synchronous Generating Facilities**

199. In Order No. 2023, the Commission revised Attachment A (Large Generating Facility Data) to Appendix 1 of the *pro forma* LGIP and Attachment 2 (Small Generator Interconnection Request) of the *pro forma* SGIP to require each interconnection customer requesting to interconnect a non-synchronous generating facility to submit to the transmission provider: (1) a validated user-defined root mean square (RMS) positive sequence dynamic model; (2) an appropriately parameterized generic library RMS positive sequence dynamic model, including a model block diagram of the inverter control system and plant control system, that corresponds to a model listed in a new table of acceptable models or a model otherwise approved by the Western Electricity Coordinating Council (WECC); and (3) a validated electromagnetic transient (EMT) model, if the transmission provider performs an EMT study as part of the interconnection study process.<sup>307</sup>

200. The Commission also: (1) defined a user-defined model as any set of programming code created by equipment manufacturers or developers that captures the latest features of controllers that are mainly software-based and represent the entities' control strategies but does not necessarily correspond to any particular generic library model, as contained in Attachment A to Appendix 1 of the *pro forma* LGIP and Attachment 2 of the *pro forma* SGIP; (2) revised Attachment A to Appendix 1 of the *pro forma* LGIP and Attachment 2 of the *pro forma* SGIP to add a table of acceptable generic library models, based on the current WECC list of approved dynamic models for renewable energy generating facilities; and (3) revised section 4.4.4 of the *pro forma* LGIP and section 1.4 (Modification of the Interconnection Request) of the *pro forma* SGIP to require that any proposed modification of the interconnection request be accompanied by updated models of the proposed generating facility.<sup>308</sup>

201. The Commission revised article 9.7.3 (Ride Through Capability and Performance) of the *pro forma* LGIA and article 1.5.7 of the *pro forma* SGIA to require that, during abnormal frequency conditions and voltage conditions within the "no trip zone" defined by Reliability Standard PRC-024-3 or successor mandatory ride through reliability standards, the non-synchronous generating facility must ensure that, within any physical limitations of the generating facility, its control and protection settings are configured or set to: (1) continue active power production during disturbance and post disturbance

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<sup>307</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1659; *see pro forma* LGIP, app. 1, attach. A; *see also pro forma* SGIP, attach. 2.

<sup>308</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1660; *see pro forma* LGIP § 4.4.4, app. 1, attach. A; *see also pro forma* SGIP § 1.4, attach. 2.

periods at pre-disturbance levels unless providing primary frequency response or fast frequency response; (2) minimize reductions in active power and remain within dynamic voltage and current limits, if reactive power priority mode is enabled, unless providing primary frequency response or fast frequency response; (3) not artificially limit dynamic reactive power capability during disturbances; and (4) return to pre-disturbance active power levels without artificial ramp rate limits if active power is reduced, unless providing primary frequency response or fast frequency response.<sup>309</sup>

202. The Commission further revised the *pro forma* LGIA to require that all newly interconnecting large generating facilities provide frequency and voltage ride through capability consistent with any standards and guidelines that are applied to other generating facilities in the balancing authority area on a comparable basis.<sup>310</sup> The Commission also replaced the term “applicable reliability council” with “electric reliability organization,” revised the definition of “applicable reliability standards,” replaced the term “control area” with “balancing authority area” throughout the *pro forma* LGIP, *pro forma* LGIA, and *pro forma* SGIA, and added the term “balancing authority.”<sup>311</sup>

203. In Order No. 2023-A, the Commission revised *pro forma* LGIA article 9.7.3 and *pro forma* SGIA article 1.5.7 to state that a non-synchronous generating facility must ensure that, within any physical limitations of the generating facility, its control and protection settings are configured or set to continue active power production during disturbance and post disturbance periods at pre-disturbance levels, unless reactive power priority mode is enabled or unless providing primary frequency response or fast frequency response.<sup>312</sup>

**a. CAISO’s Compliance Filing**

204. CAISO proposes language in RIS section 6.7.2.3, and Attachment A to Appendix 1, Proposed Appendix LL, LGIA, Proposed Appendix H, Interconnection Requirements for an Asynchronous Generating Facility and Proposed Appendix MM, SGIA, Attachment 7, Interconnection Requirements for an Asynchronous Small Generating

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<sup>309</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1715.

<sup>310</sup> *Id.* P 1733; *see pro forma* LGIA art. 9.7.3.

<sup>311</sup> Order No. 2023, 184 FERC ¶ 61,054 at P 1735; *see pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.

<sup>312</sup> Order No. 2023-A, 186 FERC ¶ 61,199 at P 661; *see pro forma* LGIA art. 9.7.3; *see also pro forma* SGIA art. 1.5.7.



Facility, to incorporate, with modification, the *pro forma* revisions adopted in Order Nos. 2023 and 2023-A.<sup>313</sup>

205. With respect to modeling, CAISO proposes to make a minor modification to remove the optional reference to an electromagnetic transient study, which it does not perform in its interconnection studies. Similarly, CAISO proposes to remove the columns for Siemens and Powerworld files because it uses General Electric software.<sup>314</sup> CAISO states that its existing GIAs already account for the Order No. 2023 *pro forma* ride-through requirements. CAISO notes that while the Commission's *pro forma* language provides high-level, general rules for ride-through, CAISO's GIA appendices provide far more granular instructions consistent with these general rules.<sup>315</sup> CAISO also states that it removed references to fast frequency response because it does not have that product.<sup>316</sup>

#### **b. Commission Determination**

206. We find that CAISO's proposed language concerning modeling and ride through requirements complies with the requirements of Order Nos. 2023 and 2023-A because CAISO adopts the revised language in the Commission's *pro forma* LGIP, *pro forma* LGIA, *pro forma* SGIP, and *pro forma* SGIA with only CAISO-specific modifications as summarized above.

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<sup>313</sup> CAISO, CAISO eTariff, Proposed app. A, Electric Reliability Organization (0.0.0); *id.* Proposed app. KK, § 6 (Cluster Study Process) (0.0.0), §§ 6.7.2, 6.7.2.3; *id.* app. 1 (Interconnection Request) (0.0.0), attach. A; *id.* Proposed app. LL, art. 1 (Definitions) (0.0.0), Applicable Reliability Standards, Balancing Authority, Balancing Authority Area, Electric Reliability Organization; *id.* art. 9 (Operations) (0.0.0), § 9.7.3; *id.* app. H (Interconnection Requirements for an Asynchronous Generating Facility) (0.0.0); *id.* Proposed app. MM, art. 3 (Effective Date, Term, Termination & Disconnection) (0.0.0), § 3.4.5; *id.* attach. 1 (Glossary of Terms) (0.0.0); *id.* attach. 7 (Interconnection Requirements for an Asynchronous Small Generating Facility) (0.0.0).

<sup>314</sup> Filing at 43.

<sup>315</sup> *Id.* at 44.

<sup>316</sup> *Id.* attach. D.

## 21. Other Compliance Directive

207. On August 20, 2024, the Commission issued an Errata Notice, which contained additional revisions to the Commission's *pro forma* LGIP, *pro forma* LGIA, and *pro forma* SGIA.<sup>317</sup> We direct CAISO to incorporate the revisions made in the Errata Notice when it submits its further compliance filing within 60 days of the date of this order.

### The Commission orders:

(A) CAISO's compliance filing is hereby accepted in part, effective May 17, 2024, as requested, subject to a further compliance filing, as discussed in the body of this order.

(B) CAISO is hereby directed to submit a compliance filing that addresses the directives in this order within 60 days of the date of this order, as discussed in the body of this order.

By the Commission.

( S E A L )

Carlos D. Clay,  
Deputy Secretary.

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<sup>317</sup> *Improvements to Generator Interconnection Procs. & Agreements*, 188 FERC ¶ 61,134.