

August 2, 2024

The Honorable Debbie-Anne A. Reese Acting Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, DC 20426

> California Independent System Operator Corporation Re: Tariff Clarifications Amendments - 2024

> > Docket No. ER24- -000

Dear Secretary Reese:

The California Independent System Operator Corporation (CAISO)<sup>1</sup> hereby submits revisions to clarify several areas of the CAISO tariff.<sup>2</sup> As part of its regular business practice to improve its tariff, the CAISO performs an annual review to identify any typographical errors in its tariff or other changes of an administrative nature. The tariff revisions proposed in this filing do not change established policies or materially affect the rights and obligations of the CAISO or its market participants, but instead add clarity, precision, and accuracy. The revisions merely correct typographical errors, realign or remove erroneous cross-references, clarify ambiguity, and ensure consistency of the tariff with the CAISO's business practices. The Commission accepted similar filings regarding the CAISO's tariff clarifications in 2019,3 2020,4 2022,5 and 2023.6

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Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A to the currently effective CAISO tariff.

The CAISO submits this filing under Section 205 of the Federal Power Act, 16 U.S.C. § 824d, Part 35 of the Commission's Regulations, 18 C.F.R. part 35, et seq., and rule 203 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.203. Capitalized terms not otherwise defined herein have the meanings set forth in the CAISO tariff.

California Independent System Operator Corp., 168 FERC ¶ 61,084 (2019).

California Independent System Operator Corp., Letter Order, Docket No. ER20-2374-000 (Sept. 4, 2020).

California Independent System Operator Corp., Letter Order, Docket No. ER23-609-000 (Feb 7, 2023).

California Independent System Operator Corp., Letter Order, Docket No. ER23-2557-000 (Oct 24, 2023).

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Although the CAISO submits these clarifications in the same filing, each change is severable from the others and is just and reasonable on its own. The CAISO respectfully requests that the Commission accept all of these revisions effective August 3, 2024, one day after filing.

## I. Proposed Tariff Modifications

Attachment A to this filing contains a matrix identifying each of the proposed tariff amendments. This attachment identifies each tariff section the CAISO proposes to change and an explanation for the proposed change, many of which are self-explanatory. For example, some changes correct e-tariff formatting or typographical errors. Other changes include more administrative updates and precision refinements to the tariff, including, for example:

## • Aligning with Effective Reliability Standards

The CAISO proposes to update tariff references to standards that are now obsolete in order to ensure accuracy. For example:

➤ In Section 34.18.1, the CAISO proposes removing language in order to align with the currently-effective version of BAL-002-WECC-3. Under the revised standard, Balancing Authority Areas procure Operating Reserves and thus Section 34.18.1, which would allow Scheduling Coordinators to procure Operating Reserves to satisfy the requirement, is obsolete.

## Correcting Procedural Descriptions

Throughout the tariff, CAISO includes various descriptions that have become outdated with the evolution of the CAISO's information technology systems or other computerized processes and procedures. As operating and computing systems evolve over time, the CAISO is refining the tariff to reflect these modernization. The CAISO proposes minor language adjustments to ensure the tariff accurately describes current procedures. For example:

- ➤ In Section 33.2.2, the CAISO proposes revisions to its recentlyaccepted Extended Day Ahead Market tariff provisions to remove the twenty-four month limitation. Removing this limitation makes clear that EDAM Entities will be allowed the necessary time to integrate their systems after executing the EDAM Implementation Agreement, which may be longer than twenty-four months.
- ➤ In Appendix K, the CAISO proposes revisions to clarify the roles and responsibilities of the Ancillary Service Requirements Provider and the Scheduling Coordinator. These revisions clarify that the tariff

obligations are those of the Ancillary Service Requirements Provider.<sup>7</sup> The Scheduling Coordinator will continue to play an integral role in completing the process steps to certify and/or test the resource providing Ancillary Services. The process steps to certify and/or test the resource providing Ancillary Services are set forth in the CAISO's Business Practice Manuals<sup>8</sup> and Operating Procedures.<sup>9</sup>

▶ In Section 36.8.2, the CAISO proposes a minor adjustment to the language to correct the procedural descriptions for the more accurately capture the Congestion Revenue Rights (CRR) allocation process for load eligible for CRRs and eligible CRR sinks. The sixteenth sentence corrects a typographical error to correctly specify settlement at the Default LAP for MSS Operators electing gross Settlement, as has been the case. The last sentence corrects a description of the procedure in the event of unforeseen changes to network conditions by removing the confusion of a reference to the unmoored "thirty-day" period and adding clarity that this period is the "initial release."

## Addressing Redundancy and Administrative Errors

In order to streamline tariff language, the CAISO reviews the tariff to ensure redundant and repetitive language is removed from the tariff to ensure accuracy and efficiency of the document. The CAISO proposes to correct redundant, erroneous, or otherwise administrative errors that occur in the Tariff, including the associated attachments and appendices, to ensure accuracy and clarity. For example:

- ➤ In Appendix F, Schedule 3, Section 13.3 the CAISO proposes to correct a typographical error, which is an unnecessarily repeated sentence. This sentence appears in Section 3 of this same Schedule and the repetition in Section 13.3 was in error.
- ➤ In Appendix F, Section 5.1, the CAISO proposes to correct a minor typographical error to remove erroneously placed parentheses.
- ➤ In Section 27.8.2, the CAISO proposes to clarify the language by removing an unnecessary sentence, which references a "Default Resource Adequacy Path." There is no defined term "Default Resource Adequacy Path" in the CAISO tariff and this obsolete

Attachment A also includes a revision to Section 8.4 of the tariff to clarify the Ancillary Service Requirement Provider's obligation to ensure its resource(s) can continue to meet the technical and operational requirements of Appendix K. See proposed revision to Section 8 (allow for suspension prior to withdrawal of the certificate).

See Business Practice Manual for Market Operations, Section 4.6.

See Operating Procedure 5330 (providing for testing of resources providing, or seeking to provide, Ancillary Services).

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> language is not necessary. Multi-Stage Generating Resources with Resource Adequacy will continue to follow the requirements for Resource Adequacy resources as set forth in Section 40 of the tariff.

➤ In Section 29.34(e)(4) the CAISO proposes to correct a minor typographical error and move the phrase "EIM Sub-Entity" to give the sentence the intended meaning.

## • E-Tariff Clean Up

The Commission maintains an E-Tariff system, as it requires all tariffs, tariff revisions and rate change applications to be filed electronically. The CAISO periodically reviews its filed tariff on the E-Tariff system to ensure it is accurate. As part of this process, CAISO discovered a few minor errors, which it proposes to adjust to ensure accuracy. With these corrections, the E-Tariff formatting now matches the formatting of the PDF version displayed on the CAISO Website. For example:

- ➤ In Appendix F, Schedule 3, Sections 8.2 and 8.3, the CAISO proposes to remove unnecessary text in the E-Tariff records to conform the E-Tariff records to the tariff records accepted by the Commission.<sup>11</sup>
- ➤ In Section 11.12.1, the CAISO proposes to correct the Tariff Record Collation Value<sup>12</sup> and order of already FERC-approved tariff language so that all tariff records appear in sequential order.
- ➤ In the Appendix Y, Appendix 4, Attachment B Table, the CAISO proposes to correct formatting of the table to increase clarity. These changes, like the entirety of the E-Tariff clean up items included in Attachment A, do not alter any content within the Attachment B Table.

#### Precision Refinements

These refinements seek to ensure tariff language effectively conveys procedures and requirements. These precision refinements enhance the accuracy of the tariff by providing additional detail. For example:

See California Independent System Operator Corp., 186 FERC ¶ 61,177, P 44 (2024) (accepting the CAISO's tariff revisions, as modified by the deficiency response). The proposed revisions in this submission ensure that the E-Tariff records reflect the deletions the CAISO proposed through its deficiency response. The PDF version of the CAISO's tariff reflects these deletions and the revisions proposed herein are limited solely to the E-Tariff records.

The Tariff Record Collation Value determine the sort order in which the Tariff Records are merged and is assigned by the tariff submitter. See <a href="https://www.ferc.gov/sites/default/files/2020-04/etariff-viewer-quide 0.pdf">https://www.ferc.gov/sites/default/files/2020-04/etariff-viewer-quide 0.pdf</a>.

<sup>&</sup>lt;sup>10</sup> Elec. Tariff Filings, 124 FERC ¶ 61,270 (2008)

- ➤ In Section 29.34(I)(2)(B)(iii), the CAISO proposes clarifications to improve the sentence structure and conform the reference to the "final binding" capacity test and flexibility test for the CAISO Balancing Authority. The final binding capacity test and flexibility test is performed at T-40.<sup>13</sup>
- ➤ In Section 29.34(n)(1)(A), the CAISO proposes clarifications that modernize the outdated reference to an "EIM Area" and correctly describes the grouping as the "Balancing Authority Areas that passes both the capacity test and flexibility tests in the upward and downward directions."
- ▶ In Section 34.3.1, in connection with the CAISO's Real-Time Unit Commitment process, the CAISO proposes to add language to more accurately describe the time at which it will run the Hour Ahead Scheduling Process (HASP). This refinement enhances accuracy by stating that the HASP will run at approximately 71.5 minutes before the hour instead of the previously-stated referenced to approximately 67.5 minutes before the hour.
- ▶ In Section 36.8.2.1, in connection with its procedures for constructing load duration curves, the CAISO proposes to add language to enhance the accuracy of the description of the provision of data. The CAISO proposes to first use the data in its possession to calculate the load duration curve in the same manner in which it is calculated today. Where the CAISO does not possess sufficient data, or it is otherwise not feasible for the CAISO to perform the calculations, then the data will be provided by the Load Serving Entity.¹⁴

# Updating Communication Method Options

In order to ensure efficiency, the CAISO proposes to update communication methods to eliminate outdated communication methods. For example:

➤ In Section 6.5.5.1, the CAISO proposes to update the communication method options by removing "fax" as a communication option to reflect current communication options.

See existing tariff Section 29.34(f)(1)(c).

Similar clarifications are proposed for Section 36.8.2.2, with the Load Serving Entity responsible for providing historical data if that data is not in the CAISO's possession. See Attachment A.

➤ In Appendix EE, Article 15.1, the CAISO proposes update the methods of contact by removing "facsimile" and adding "E-mail address" to ensure communication methods are efficient.<sup>15</sup>

## Updating Cross References

Over time as tariff sections are added and adjusted, the CAISO must ensure that cross references between sections are up to date. The CAISO has identified instances where section cross references are out of date. For example:

- ➤ In Section 4.17.6, the CAISO proposes to update a tariff cross reference to Section 34.10, which reflects a typographical error. The correct cross reference is Section 34.11.
- ➤ In Appendix A, the CAISO proposes to correct a tariff cross reference to Appendix L, which has since been retired. The correct cross reference is Appendix L-1.

## Moving Language from Pro Forma to Tariff

There are certain instances where language in *pro forma* agreements is more appropriately included in the tariff sections as the language is generally-applicable. To ensure continuity, the CAISO proposes moving the language of these sections from the *pro forma* agreements and into the main body of the Tariff. The language moved from the *pro forma* to the tariff is identical. For example:

➢ In Section 29.4(d)(3)(D), the CAISO proposes to incorporate language from the EIM Participating Resource Agreement in Appendix B.19 to the CAISO tariff. This language conveys the requirement to comply with tariff requirements regarding resource registration, measurement, and verification. While the tariff had previously implied the requirement to comply with resource registration, measurement, and verification, moving the requirement for compliance from individually-executed proforma agreements and placing the language in the body of the tariff will enhance clarity and remove confusion.

Similar clarifications are proposed for Appendix FF to ensure the Small Generator Interconnection Agreement also collects an E-mail address and does not rely on fax transmissions. At a future date, the CAISO intends to file revisions to update the applicable provisions of Appendix KK, LL, and MM. Appendix KK, LL, and MM are currently pending before the Commission.

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#### II. Stakeholder Process

The CAISO initiated a process to obtain stakeholder input concerning the proposed tariff changes in this filing on June 28, 2024. The CAISO received written comments on the proposed changes and held one conference call with stakeholders to discuss stakeholder concerns, similar to the approach taken in previous yearly filings. The CAISO conducted follow-up outreach following the stakeholder call and solicited an additional round of comments. The CAISO reposted the proposed tariff changes for stakeholder review. The CAISO appreciates stakeholders' ongoing efforts to help clarify the CAISO's tariff.

## III. Effective Date and Waiver

The CAISO respectfully requests an effective date of August 3, 2024. The CAISO respectfully requests the Commission grant waiver of its prior notice requirement to accept the tariff revisions contained in this filing effective one day after filing.<sup>17</sup> The CAISO has met with stakeholders to discuss the limited nature of these tariff amendments and has received no opposition. The changes proposed through this submission each enhance clarity, precision, and eliminate confusion. The Commission has previously accepted CAISO tariff revisions that went into effect before 61 days, including the day after filing.<sup>18</sup> Good cause exists to grant the requested waiver and establish an August 3, 2024 effective date for the proposed tariff clarifications.

A record of the CAISO's 2024 stakeholder process and comments received is available at <a href="https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/Tariff-clarifications-filing-process-2024">https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/Tariff-clarifications-filing-process-2024</a>

A record of the CAISO's 2023 stakeholder process and comments received is available at <a href="http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx">http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx</a>.

Specifically, pursuant to section 35.11 of the Commission's regulations, 18 C.F.R. § 35.11, the CAISO respectfully requests waiver of the notice requirement contained in section 35.3(a)(1) of the Commission's regulations, 18 C.F.R. § 35.3(a)(1).

See California Indep. Sys. Operator Corp., 151 FERC ¶ 61,108 (2015); California Indep. Sys. Operator Corp., 181 FERC ¶ 61,146 (2022).

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#### IV. Communications

In accordance with Rule 203(b)(3) of the Commission's Rules of Practice and Procedures, <sup>19</sup> the CAISO requests that all communications regarding this filing should be directed to, and the CAISO asks the Secretary to include on the official service list the following: <sup>20</sup>

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#### V. Service

The CAISO has served copies of this transmittal letter, and all attachments, on the California Public Utilities Commission, the California Energy Commission, and parties with effective scheduling coordinator service agreements under the CAISO tariff. In addition, the CAISO is posting this transmittal letter and all attachments on the CAISO Website.

<sup>&</sup>lt;sup>19</sup> 18 C.F.R. § 385.203(b)(3).

Official service is to be provided to the individual designated with an asterisk.

# VI. Materials Provided In This Filing

The following documents, in addition to this transmittal letter, support this filing:

Attachment A Matrix listing and describing each proposed tariff

change;

Attachment B Clean CAISO tariff sheets incorporating these

requested tariff changes; and

Attachment C Red-lined document showing the revisions proposed in

this tariff amendment.

#### VII. Conclusion

In this filing, the CAISO proposes amendments to its tariff to clarify the meaning of existing tariff provisions, ensure consistency throughout the tariff and between the tariff and business practices, and to correct typographical and other inadvertent errors. The CAISO respectfully requests that the Commission accept these tariff amendments with an effective day of August 3, 2024. Please do not hesitate to contact the undersigned if you have any questions.

Respectfully submitted,

/s/ Heather Curlee

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Counsel for the California Independent System Operator Corporation

# Attachment A – Matrix of Changes 2024 Tariff Clarification Filing California Independent System Operator Corporation August 2, 2024



Section	Proposed Redlines	Reason for Change
Sec 4.17.6, First Paragraph, Third Sentence	The CAISO may also issue an Exceptional Dispatch Instruction for the Distributed Energy Resource Aggregation for reliability pursuant to Section 34.110.	Updating Cross Reference. Section 34.10 is for Dispatch of Ancillary Services. Section 34.11 is for Exceptional Dispatch.
Sec 6.5.5.1, Second and Third Sentences	If there is a failure of electronic communications with a Scheduling Coordinator, then, at the CAISO's discretion, the Scheduling Coordinator may communicate by phone or other communication methodfacsimile.  Communication by facsimilethat is not electronic requires verbal approval by the CAISO.	Precision Refinement.  Modernizing to remove reference to facsimile and to provide for additional communication options.
Section 8.4, Last Sentence	If at any time the CAISO's technical requirements are not being met, the CAISO may suspend or withdraw the certificate for the Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource concerned.	Precision Refinement. Enhancing precision to align with ongoing obligations for resources providing Ancillary Services, as detailed in Appendix K.
Sec 11.12.1*	Tariff record	eTariff Clean Up (Sorting Location)
Sec 11.12.2*	Tariff record	eTariff Clean Up (Sorting Location)
Sec 11.17.1*	Tariff record	eTariff Clean Up (Sorting Location)



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Sec 27.8.2, Second to Last Sentence	The Scheduling Coordinator must establish the default MSG Configuration and its associated Default Resource Adequacy Path that apply to Multi-Stage Generating Resources that are subject to Resource Adequacy must-offer obligations.	Precision Refinement. The CAISO is proposing to remove this unnecessary sentence. There is no defined term "Default Resource Adequacy Path". For MSG resources, the RA must offer obligation applies to the configurations that reflects the RA capacity. The default MSG Configuration is also no longer a requirement in the tariff.		
Sec 29.4(d)(3)(D)	(D) comply with all CAISO Tariff requirements associated with resource registration and the measurement and verification of the associated services to be provided for EIM Resources other than Generating Units or CAISO qualified resources delivering Energy.	Updating Cross Reference. Moving language from pro forma to tariff. The language remains the same, but will not be in Section 29.4(d)(3)(D) instead of the Section 4.1.1 of the EIM Participating Resources Agreement <i>pro forma</i> .		
Sec 29.34(e)(4)	(4) Contents of EIM Base Schedules. EIM Base Schedules and EIM Sub-Entities of EIM Entities and EIM Sub-Entities must include hourly-level Demand Forecasts for EIM Demand, hourly-level schedules for resources, including any hourly-level schedules below PMin that the EIM Entity seeks an accounting for, and, for EIM Entities only, hourly-level scheduled Interchanges.	Precision Refinement. The term "EIM Sub-Entities" is moved to the correct place in the sentence.		



Sec 29.34 (I)(2)(B)(iii)	(iii) an Import Bid or Export Bid for delivery to or export from the CAISO Balancing Authority Area without lacking a transmission profile in a submitted E-Tag that supportings its Interchange Schedule at the time the final binding by T-40, in both the capacity test and the flexibility test for the CAISO Balancing Authority Area are performed in accordance with Section 29.34(m).	Precision Refinement. Enhancing precision by improving sentence structure and confirming references to the binding RSE tests performed as provided in Section 29.34(f)(1)(c).
Sec 29.34 (n)(1)(A)	(A) the CAISO will not include the EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area in the Uncertainty Requirement of the EIM Area for the group of Balancing Authority Areas that passes both the capacity test and flexibility tests in the upward and downward directions, as applicable; and	Precision Refinement. Enhancing precision by improving sentence structure to remove outdated reference to "EIM Area" and more clearly referencing the group of balancing authority areas.
Sec 29.34 (n)(1)(B)	(B) the CAISO will hold the EIM Transfer limit into or from the EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area, as specified in Section 29.34(n)(2), at the less restrictive of the value for the last 15-minute interval with sufficient Supply balance or the hourly Real-Time EIM Base Schedule corresponding to the 15-minute interval with insufficient Supply as described in the business practice manual.	Precision Refinement. Enhancing sentence structure to remove confusion and direct to the example in the BPM to illustrate sufficient Supply balance for the last 15-minute interval.



Sec 29.34 (n)(1)(C) (C) To facilitate procurement of the Flexible Ramping

Product and determination of the Uncertainty
Requirement in the manner provided by Section 44.2.4
within the existing RTUC processes and along the time
intervals for RTUC runs set forth in Section 34.3.1 and
further explained in the Business Practice Manual for
Market Operations, and solely for the purpose of this
subsection 29.34(n)(1), the final opportunity for the EIM
Entity to revise hourly Real-Time EIM Base Schedules to
allow for procurement of the Flexible Ramping Product
for the first fifteen-minute interval of each hour will be
that provided in Section 29.34(f)(1)(B) and the final
opportunity for the EIM Entity to revise hourly Real-Time
EIM Base Schedules to allow for procurement of the
Flexible Ramping Product for the remaining intervals of
each hour will be that provided in Section 29.34(f)(1)(C).

2024 Tariff Changes Matrix

Precision Refinement. Enhancing sentence structure to describe the Flexible Ramping Product, which is procured to satisfy the Uncertain Requirement in the manner provided in Section 44.2.4.



Sec 29.34 (n)(2)(C)

(C) To facilitate procurement of the Flexible Ramping Product and determination of the Uncertainty Requirement in the manner provided by Section 44.2.4 within the existing RTUC processes and along the time intervals for RTUC runs set forth in Section 34.3.1 and further explained in the Business Practice Manual for Market Operations, and solely for the purpose of this subsection 29.34(n)(2), the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the first fifteen-minute interval of each hour will be that provided in Section 29.34(f)(1)(B) and the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the remaining intervals of each hour will be that provided in Section 29.34(f)(1)(C).

Precision Refinement. Enhancing sentence structure to describe the Flexible Ramping Product, which is procured to satisfy the Uncertain Requirement in the manner provided in Section 44.2.4.



Sec 29.34 (n)(3)(A)

(A) In General. A Balancing Authority Area in the EIM Area may obtain assistance Energy transfers into its Balancing Authority Area prior to December 31, 2025 if its Scheduling Coordinator has submitted to the Master File a designation elected to accept automatically incremental EIM Transfer imports and pay the associated EIM Assistance Energy Transfer Surcharge following the failure of the upward capacity test in Section 29.34(I) or the upward flexibility test in Section 29.34(m) in accordance with the timelines and procedures included in the Business Practice Manual for the Energy Imbalance Market. Consistent with the requirements in the Business Practice Manual, the CAISO will issue send a Mmarket notification Notice prior to the CAISO Balancing Authority Area accepting assistance Energy transfers as provided in this section, with such election to remain in effect unless the CAISO issues a Market Notice at least 5 Business Days prior to withdrawing or resuming its participation.

2024 Tariff Changes Matrix

Precision Refinement. Enhancing sentence structure to remove reference to specific CAISO systems (Master File, Market Notice) while still allowing for election and notification in the same form and manner



2024	<b>Tariff</b>	Changes	Matrix
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Sec 29.34 (n)(3)(B)(i)	(B) Assistance Energy Transfer Product. If a participating Balancing Authority Area in the EIM Area has opted-in to receive assistance Energy transfers consistent with the process requirements set forth in the Business Practice Manuals and the participating Balancing Authority Area fails the upward capacity test in Section 29.34(I) or the upward flexibility test in Section 29.34(m) then— (i) the Balancing Authority Area will not be subject to the capacity test or flexibility test failure consequences for EIM Transfers in Section 29.34(n); (ii) the Balancing Authority Area will pay the EIM Assistance Energy Transfer Surcharge according to Section 29.11(t).	Precision Refinement. Enhancing sentence structure to remove confusion as to the value of the Assistance Energy Transfer Product and more clearly specify the product allows a Balancing Authority Area to avoid a limitation of EIM Transfers.
Sec 30.4.6.2.2, Last Paragraph, Second to Last Sentence	Additional detail regarding the calculation of Opportunity Costs is provided in Appendix N to the Business Practice Manual for Market Instruments.	Precision Refinement. Removing reference to specific Appendix and formal business practice manual designation so that the CAISO is no longer limited in the specific location in which it provides necessary information.



Sec 33.2.2

2024 Tariff Changes Matrix

Implementation Date.	Precision Ref
The CAISO and the prospective EDAM Entity shall	Removing two
work together to determine the EDAM Entity	limitation to p
Implementation Date based on the complexity and	time to EDAM
compatibility of the Balancing Authority's	integrate if the
transmission and technology systems with the	than twenty-fo
CAISO systems and the planned timing of the	
CAISO's implementation of software enhancements.	
The EDAM Entity Implementation Date must be not	
less than six months <del>and not more than twenty-four</del>	
months after the date that the EDAM Entity	
Implementation Agreement between the CAISO and	
the Balancing Authority becomes effective in	
accordance with its terms. Once established, the	
EDAM Entity may request a change in the EDAM	
Entity Implementation Date to account for any	
circumstances that may affect the implementation	
timeline.	

Precision Refinement.
Removing twenty-four month
limitation to provide sufficient
time to EDAM entities to
integrate if that period is longer
than twenty-four months.



Camerin		2024 Tariff Changes Matrix
Sec 34.1.6.3	Hybrid Resources The CAISO will use reasonable efforts to issue Real-Time Market Schedules that observe Hybrid Resources' Dynamic Limits, High Sustainable Limits, State of Charge, and production forecasts, as applicable. Hybrid Resources with a variable component may elect to receive a CAISO forecast to inform their bidding, or they may elect to use their own forecast. For Hybrid Resources that have elected to use their own forecast as specified in Section 4.8.2.1.1, the responsible Scheduling Coordinator must submit to the CAISO its forecast for the variable component for the binding interval by 37.5 minutes prior to flow (the start of the applicable FMM optimization for the binding interval). If such Scheduling Coordinator does not provide such forecast to the CAISO, the CAISO will use the direct telemetry MW output from the resource's variable component.	Precision Refinement. Correcting procedural descriptions to reflect modernized process of Hybrid Resources of maintaining a static election on forecast.
Section 34.3.1, Sixth Sentence	The HASP is a special RTUC run that is performed at approximately 67.5 71.5 minutes before each Trading Hour and has the additional responsibility of pre dispatching Energy and awarding Ancillary Services for HASP Block Intertie Schedules.	Precision Refinement. Ensuring tariff and BPM alignment on description of the approximate time at which HASP is run to avoid confusion.



2024 Tariff Changes Matrix		
Sec 34.18.1, First Sentence	Where a Scheduling Coordinator has chosen to self-provide the whole of the additional Operating Reserve required to cover any Interruptible Imports which it has submitted through Self-Schedules in the Day-Ahead Market and has identified specific Generating Units, Participating Loads, System Units or System Resources as the providers of the additional Operating Reserve concerned, the CAISO shall Dispatch only the designated Generating Units, Participating Loads, System Units or System Resources in the event of the CAISO being notified that the on demand obligation is being curtailed.	Updating Cross Reference. Aligning with effective standards: BAL-002-WECC-3, R1. Balancing Authority Areas, not Scheduling Coordinators, must procure Operating Reserve.
Sec 36.8.2, 16th Sentence	Load that is non-Participating Load, and (i) is not Load associated with Pumped-Storage Hydro Units, (ii) and is not Load associated with ETCs, TORs, or (iii) is not Load associated with MSS Operators that elects net Settlement, will be is scheduled and settled at the Default LAP.	Precision Refinement. Enhancing sentence structure to clarify that the Default LAP settlement applies to Load that is non-Participating Load and also is not load associated with the three specified categories.
Sec 36.8.2, Last Sentence	In the event that unforeseen changes to network conditions arise after the <u>initial</u> thirty-day release of the list of allowable CRR Sinks and warrant revisions to that list, the CAISO will provide updates to the list prior to the closing of nominations for the CRR Allocation.	Precision Refinement. Correcting procedural descriptions to remove confusion on thirty-day release and clarify this is the initial period.



Sec 36.8.2.1, First Sentence

Where feasible, the The CAISO constructs Load duration | Precision Refinement. Enhancing

Where feasible, the The CAISO constructs Load duration curves by season and time of use periods for the annual CRR Allocation process for each LSE based on meter data already within the CAISO's possession. If the CAISO does not possess the needed meter data or it is otherwise not feasible for the CAISO to calculate the Load duration curves based on data within its possession, then the Load duration curves will be based on the LSE's submission to the CAISO of its historical hourly Load data for the prior year, for each LAP within which the LSE serves Load.

Precision Refinement. Enhancing data provision and removing burden from participants by allowing the CAISO to construct load duration curve using data in its possession in the first instance.



Sec 36.8.2.2.2

The Monthly CRR Load Metric for an An LSE that serves Load that is eligible for CRRs but for which its whose Load forecast is not verifiable in accordance with Section 36.8.6 is established based on shall, each month, submit to the CAISO five (5) years of prior hourly historical Load data for that Load for the same applicable month. The LSE must provide the historical Load data to the CAISO if the CAISO does not possess that data. Such LSE may submit fewer years of historical data for that Load if granted a waiver by the CAISO because five (5) years of such Load data does not exist. Each month the CAISO will use the LSE's submitted hourly historical Load data for the relevant month to calculate two (2) Load duration curves for each year of historical Load data (one on-peak and one off-peak Load duration curve for the applicable month) for each CRR Sink in which such Load is located. For each Load duration curve, the CAISO will calculate the MW level of Load that is exceeded only in 0.5% of the hours. The CAISO will calculate an LSE's Monthly CRR Eligible Quantity for each on-peak and off-peak period for such Load by averaging the 0.5% exceeded values for all years of submitted historical data the five years of data (or fewer years, if the CAISO does not possess five years of data and the CAISO granted the LSE waiver to submit fewer than five years of data), and then subtracting the quantity of Load served by its TORs, ETCs, and Converted Rights.

2024 Tariff Changes Matrix

Correcting procedural descriptions. Enhancing data provision and removing burden from participants by allowing the CAISO to construct load duration curve using data in its possession in the first instance. Where the CAISO does not have such data, additional details are provided.



		2024 famil Changes Matrix
Sec 36.11.2	No less than forty-five (45) days prior to the in-service date of a Merchant Transmission Facility, the Project Sponsor of the facility will inform the CAISO of the In-Service Date of the facility and that the Project Sponsor will be requesting Merchant Transmission CRRs associated with the Merchant Transmission Facility. The CAISO will complete the Merchant CRR Allocation as soon as feasible after the In-Service Date of the facility. The effective date of any such allocated Merchant Transmission CRRs is prospective and the Merchant Transmission CRRs are not settled and will allocate Merchant Transmission CRRs whose payment stream will be retroactive back to the In-Service Date.	Precision refinement. Enhancing procedural descriptions of Merchant CRR Allocation process and to remove language regarding a "payment stream."
Appendix A, Available Transfer Capability (ATC)	The available capacity of a given transmission path, in MW, after subtraction from that path's Total Transfer Capability of capacity associated with Existing Contracts and Transmission Ownership Rights and any Transmission Reliability Margin, as established consistent with CAISO and WECC transmission capacity rating guidelines, as further described in Appendix L-1.	Updating Cross Reference. Appendix L has been retired.
Appendix A, Capacity Benefit Margin (CBM)	The factor defined in Appendix L-1.	Updating Cross Reference. Appendix L has been retired.
App A, EIM Upward Availability Balancing Capacity	EIM Upward Availability Available Balancing Capacity	Correcting typographical error.
Appendix A, Transmission Reliability Margin (TRM)	A factor described in Appendix L <u>-1</u> .	Updating Cross Reference. Appendix L has been retired.



App B.19, Sec 4.1.1	4.1.1 Additional EIM Participating Resource Requirements. The EIM Participating Resource shall comply with all CAISO Tariff requirements associated with resource registration and the measurement and verification of the associated services to be provided for EIM Resources other than Generating Units or CAISO qualified resources delivering Energy.	Moving language from pro forma to Section 29.4(d)(3)(D) of the tariff.
App F, Schedule 1, Part A, Item 2.	The rate for the System Operations Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category, net the projected TOR Charges by forecast annual gross absolute value of MWh of real-time energy flows on the CAISO Controlled Grid, net of amounts excluded pursuant to Part E of this Schedule.	Correcting cross-reference. Part E was removed in 2023 in docket number ER23-2974.
App F, Schedule 1, Part E (Header)	Part E [Not Used]	Correcting cross-reference. Part E was removed in 2023 in docket number ER23-2974. The header was unintentionally removed during that filing.
App F, Schedule 3, Sections 8.2 and 8.3	<ul> <li>8.2 Any refund associated with a Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement or Non-Subscriber Usage Rate that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced in the CAISO Market Invoice.</li> <li>8.3 If the Participating TO withdraws one or more of its transmission facilities from the CAISO Operational Control in accordance with Section 3.4 of the</li> </ul>	eTariff Clean Up. Officially removing text that was removed in a previous filing (ER23-2917).
	Transmission Control Agreement, then the CAISO will no longer collect the TRR for that transmission facility through the CAISO's Access Charge or provide a Non-Subscriber Usage Payment Amount for that transmission	



		2024 Tarili Orlanges Matrix
	facility effective upon the date the transmission facility is no longer under the Operational Control of the CAISO. The withdrawing Participating TO shall be obligated to provide the CAISO with all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR or Non-Subscriber Usage Rate. The CAISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from CAISO Operational Control, except the withdrawal of Subscriber Participating TO transmission facilities.	
App F, Schedule 3, Section 13.3, Last Sentence	The Non-Load-Serving Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.	This sentence appears in Section 3 of this same section. Removing the duplicate occurrence.
App K, Intro	The requirements set forth in this Attachment K may be satisfied by the Ancillary Service Requirements Provider, an applicant to become an Ancillary Service Requirements Provider, or the applicable Scheduling Coordinator by following the process and procedures set forth in the Business Practice Manual.	Correcting procedural descriptions to remove confusion that the process of registering, testing, certifying, and operating resources providing Ancillary Service is equally applicable.
App K, Part A 1	A 1 An Ancillary Service Provider wishing to provide Regulation as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision arrangement must meet the following operating characteristics and technical requirements in order to be and remain, certified by the CAISO to provide Regulation service unless granted a temporary exemption by the CAISO in accordance with criteria which the CAISO shall publish on the CAISO Website;	Correcting procedural descriptions to remove confusion on ongoing nature of obligation.



		2024 Tarili Chariges Matrix
App K, Part A 2	A 2 An Ancillary Service Provider wishing to be considered for certification for Regulation service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Regulation service. The Ancillary Service Provider shall at the same time send a copy of its request to that Scheduling Coordinator. Technical review request forms will be available from the CAISO.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part A 3	A 3 No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of required interface equipment for Regulation, including a standard CAISO direct communication and direct control system. The CAISO shall send a copy of the listing to the resource's Scheduling Coordinator.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part A 5	A 5 The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six (6) weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process by each sending to the Scheduling Coordinator a copy of any written communication which it sends to the other.	Correcting procedural descriptions to move process details into the business practice manual.



		2024 Tarili Changes Matrix
App K, Part A 6	A 6 Upon agreement as to any alternative method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing providing a copy to the Ancillary Service Provider's Scheduling Coordinator at the same time. If agreed by the CAISO, the Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication and control.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part A 9	A 9 When the CAISO is satisfied that the communication and control systems meet the CAISO's requirements, the Ancillary Service Provider shall request in writing that the CAISO conduct a certification test with a suggested primary date and time and at least two (2) alternative dates and times. The CAISO shall, within two (2) Business Days of receipt of the Ancillary Service Provider's request, accept a proposed time if possible or suggest at least three (3) alternatives to the Ancillary Service Provider. If the CAISO responds by suggesting alternatives, the Ancillary Service Provider shall, within two (2) Business Days of receipt of the CAISO's response, respond in turn by accepting a proposed alternative if possible or suggesting at least three (3) alternatives, and this procedure shall continue until agreement is reached on the date and time of the test. The Generator Ancillary Service Provider shall inform its Scheduling Coordinator of the agreed date and time of the test.	Correcting procedural descriptions to remove confusion that all resources, and not only generators, must inform the Scheduling Coordinator.



App K, Part A 11	A 11 Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Regulation as an Ancillary Service Provider and shall provide a copy of the certificate to the Scheduling Coordinator at the same time. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Regulation.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part A 13	A 13 The certification to provide Regulation shall remain in force, subject to suspension, until:  (a) withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day; or (b) if the resource obtained CAISO certification on the basis of a prior communication and control technology, until revoked by the CAISO for failure to comply with the requirement set forth in A 13.1 that the resource install a CAISO-specified standard CAISO direct communication and direct control system (unless exempted by the CAISO).	Correcting procedural descriptions to remove confusion on ongoing nature of obligation.
App K, Part B 1	<b>B 1</b> An Ancillary Service Provider wishing to provide Spinning Reserve as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Spinning Reserve service:	Correcting procedural descriptions to remove confusion on ongoing nature of obligation.



App K, Part B 2	B 2 An Ancillary Service Provider wishing to be considered for certification for Spinning Reserve service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Spinning Reserve service. The Ancillary Service Provider shall at the same time send a copy of its request to that Scheduling Coordinator. Technical review request forms will be available from the CAISO.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part B 3	B 3 No later than one week after receipt of the request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Spinning Reserve. The CAISO shall send a copy of the listing to the Ancillary Service Provider's Scheduling Coordinator.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part B 4	<b>B 4</b> The Ancillary Service Provider may elect to implement any of the approved options defined by the CAISO, and, if it wishes to proceed with its request for certification, shall give written notice to the CAISO of its selected communication option, with a copy to its Scheduling Coordinator.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part B 5	B 5 When it receives the Ancillary Service Provider notice, the CAISO shall notify the Ancillary Service Provider and the Scheduling Coordinator in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment, the Ancillary Service Provider may proceed as indicated below to secure the necessary facilities and capabilities required.	Correcting procedural descriptions to move process details into the business practice manual.



		2024 Tarili Orlanges Matrix
App K, Part B 7	B 7 The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process by each sending to the Scheduling Coordinator a copy of any written communication which it sends to the other.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part B 8	<b>B</b> 8 Upon agreement as to the method of communication and control to be used by the resource, the CAISO shall provisionally approve the Ancillary Service Provider's proposal in writing providing a copy to the resource's Scheduling Coordinator at the same time. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part B 13	<b>B 13</b> Upon successful completion of the test the CAISO shall certify the resource as being permitted to provide Spinning Reserve as an Ancillary Service Provider and shall provide a copy of the certificate to the Scheduling Coordinator at the same time. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Spinning Reserve.	Correcting procedural descriptions to move process details into the business practice manual.



		2024 Tarili Chariges Matrix
App K, Part B 15	<b>B 15</b> The certification to provide Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day.	Correcting procedural descriptions to remove confusion on ongoing nature of obligation.
App K, Part C 1	C 1 An Ancillary Service Provider wishing to provide Non-Spinning Reserve as an Ancillary Service from a resource whether pursuant to the CAISO's auction or as part of a self-provision arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Non-Spinning Reserve service:	Correcting procedural descriptions to remove confusion on ongoing nature of obligation.
App K, Part C 3	C 3 An Ancillary Service Provider wishing to be considered for certification for Non-Spinning Reserve service must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Non-Spinning Reserve. The Ancillary Service Provider shall at the same time send a copy of the request to that Scheduling Coordinator. Technical review request forms will be available from the CAISO.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part C 4	C 4 No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Non-Spinning Reserve. The CAISO shall send a copy of the listing to the Ancillary Service Provider's Scheduling Coordinator.	Correcting procedural descriptions to move process details into the business practice manual.



		ZUZT Tarili Orlanges Matrix
App K, Part C 5	C 5 The Ancillary Service Provider may elect to implement any of the acceptable communication options and interface equipment options. The Ancillary Service Provider shall give written notice to the CAISO of its selected communication option and interface equipment option, with a copy to its Scheduling Coordinator.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part C 6	C 6 When it receives the Ancillary Service Provider's notice, the CAISO shall notify the Ancillary Service Provider and the Scheduling Coordinator in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment the Ancillary Service Provider may proceed as indicated below to secure the necessary facilities and capabilities required.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part C 8	C 8 The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process by each sending to the Scheduling Coordinator a copy of any written communication which it sends to the other.	Correcting procedural descriptions to move process details into the business practice manual.



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App K, Part C 9	C 9 Upon agreement as to the method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing providing a copy to the Ancillary Service Provider's Scheduling Coordinator at the same time. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part C 14	C 14 Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Non-Spinning Reserve as an Ancillary Service and shall provide a copy of the certificate to the Scheduling Coordinator at the same time. The Scheduling Coordinator shall request the CAISO to update its database to reflect the permission for the resource to provide Non-Spinning Reserve.	Correcting procedural descriptions to move process details into the business practice manual.
App K, Part C 16	C 16 The certification to provide Non-Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day.	Correcting procedural descriptions to remove confusion on ongoing nature of obligation.
Appendix L-1, Section 1.3.1, Second to last paragraph	Existing Contract capacity reservations remain reserved during the Day-Ahead Market and HASP.through the FMM.— To the extent-that the reservations are unused after the FMM HASP has been run for a given fifteen-minute interval, then the capacity reservations are released for the remaining Real-Time Market processes conducted for the given Trading Hour three RTD intervals within that fifteen-minute interval.	Precision Refinement. Enhancing sentence structure to remove colloquial language and more precisely describe the Real-Time Market processes.



		ZOZT Idilli Olidliges Matrix
App P, Section 5.1	DMM shall review existing and proposed market rules, tariff provisions, and market design elements and recommend proposed rule and tariff changes to the CAISO, the CAISO Governing Board, FERC staff, the California Public Utilities Commission, {M}Market {P}Participants, and other interested entities.	Correcting typographical error
App S, Section 4.4*	Tariff record	eTariff Clean Up. Removing Appendix S, Section 4.5 language from the App S, Section 4.4 tariff record in FERC's eTariff version.
App U, Section 13.1*	Tariff record	eTariff Clean Up. Reinstating 13.1 tariff language unintentionally removed during recollation filing (ER23-1977).
App U, Appendix 7, Attachment A, Tables	Table formatting	eTariff Clean Up. Improving formatting for both tables in the eTariff record.
Appendix X, Article 10.1.1, first sentence	10.1.1 The Approved Project Sponsor agrees that it shall not seek, for recovery through its Transmission Revenue Requirement, higher costs than the maximum costs specified in, or determined in accordance with, any cost cap or other binding cost containment measures as specified in Appendix E except for costs incurred to comply with any additional specifications of the CAISO or Interconnecting PTO beyond the functional requirements for the transmission facility included in Appendix A to this agreement that the CAISO issued for the competitive solicitation.	Updating Cross Reference to allow for listing of requirements in Appendix A of the executed agreement and removing reference to the solicitation.
App Y, App 1, Att A, Table	Table formatting	eTariff Clean Up. Improving formatting for the table in the eTariff record.



App Y, App 4, Att A, Tables	Table Formatting	eTariff Clean Up. Improving formatting for both tables in the eTariff record.
App Y, Appendix 5, Table	Table Formatting	eTariff Clean Up. Improving formatting for the table in the eTariff record.
App EE, Art 5.19.1, Last Paragraph	Notwithstanding Section 7.5 of Appendix DD, aAt any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 6.7.27.5.11 of Appendix DD will still apply to such requests to reduce capacity.	Updating Cross References. The previous references were outdated.



App EE, Article 15.1, 15.3, Contact Info

#### 15.1 General.

Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, conveyed by e-mail, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

#### 15.3 Alternative Forms of Notice.

Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given <u>as provided in Article 15.1</u> in writing may be so given by telephone, <u>facsimile</u> or e-mail to the telephone numbers and e-mail addresses set out in Appendix F. 2024 Tariff Changes Matrix

Precision Refinement. Enhancing means of communication by allowing for e-mail notice and removing facsimile.



2024 Tariff Changes Matrix

		2024 Idilli Olidliges Matrix
App FF, Article 1.5.1	<b>1.5.1</b> The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice. The Parties shall use the <a href="mailto:applicable">applicable</a> Large Generator Interconnection Agreement (CAISO Tariff Appendix CC) to interpret the responsibilities of the Parties under this Agreement.	Updating Cross Reference as the prior reference was outdated.
App FF, Article 13.1, 13.3, 13.4 Contact Info	Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, conveyed by email, or sent by first class mail, postage prepaid, to the person specified below  FaxE-mail address: (all 3 instances)  13.3 Alternative Forms of Notice.  Any notice or request required or permitted to be given by any Party to the other Parties and not required by this Agreement to be given in writing as provided in Article 13.1 may be so given to the alternate contacts listed in this Article 13.3 by telephone, facsimile or email to the telephone numbers and e-mail addresses set out below:  Fax: (all 3 instances)  13.4 Designated Operating Representative	Precision Refinement. Enhancing means of communication by allowing for e-mail notice and removing facsimile.
	FaxE-mail address: (both instances)	

<sup>\*</sup>Not included in Attachment B or Attachment C. They are eTariff changes only. No tariff language edits proposed.

# Attachment B – Clean Tariff 2024 Tariff Clarification Filing California Independent System Operator Corporation August 2, 2024

#### Section 4

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#### 4.17.6 Operating Requirements

Distributed Energy Resource Aggregations will respond to (1) CAISO Dispatch Instructions and (2) instructions from the Utility Distribution Company to maintain the safety and reliability of the Distribution System. The CAISO may dispatch a Distributed Energy Resource Aggregation to the extent the Distributed Energy Resource Aggregation bids or schedules Energy or Ancillary Services into the CAISO Markets and receives an award. The CAISO may also issue an Exceptional Dispatch Instruction for the Distributed Energy Resource Aggregation for reliability pursuant to Section 34.11. Distributed Energy Resource Aggregations shall respond to Dispatch Instructions consistent with Generation Distribution Factors for the Distributed Energy Resource Aggregation.

\* \* \* \* \*

#### Section 6

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#### 6.5.5.1 Communications with Scheduling Coordinators

Communications between the CAISO and Scheduling Coordinators shall take place via the CAISO's secure communication system to a dedicated terminal at the Scheduling Coordinator's scheduling center. If there is a failure of electronic communications with a Scheduling Coordinator, then, at the CAISO's discretion, the Scheduling Coordinator may communicate by phone or other communication method. Communication that is not electronic requires verbal approval by the CAISO.

#### Section 8

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#### 8.4 Technical Requirements for Providing Ancillary Services

All Generating Units, System Units, Participating Loads, Proxy Demand Resources, and System Resources providing Ancillary Services shall comply with the technical requirements set out in Sections 8.4.1 to 8.4.3 below relating to their operating capabilities, communication capabilities and metering infrastructure. No Scheduling Coordinator shall be permitted to submit a Bid to the CAISO for the provision of an Ancillary Service from a Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource, or to provide a Submission to Self-Provide an Ancillary Service from a Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or Dynamic System Resource, unless the Scheduling Coordinator is in possession of a current certificate issued by the CAISO confirming that the Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource complies with the CAISO's technical requirements for providing the Ancillary Service concerned. Scheduling Coordinators can apply for Ancillary Services certificates in accordance with the requirements for considering and processing such applications in Appendix K and the CAISO's Operating Procedures. The CAISO shall have the right to inspect Generating Units, Participating Loads, Proxy Demand Resources, or the individual resources comprising System Units and other equipment for the purposes of the issue of a certificate and periodically thereafter to satisfy itself that its technical requirements continue to be met. If at any time the CAISO's technical requirements are not being met, the CAISO may suspend or withdraw the certificate for the Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource concerned.

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#### Section 27

#### 27.8.2 Informational Requirements

As part of the registration process described in Section 27.8.1, the Scheduling Coordinators for Generating Units that seek to qualify as Multi-Stage Generating Resources must submit to the CAISO a Transition Matrix, which contains the Transition Costs and operating constraints associated with MSG Transitions. The Scheduling Coordinator may register up to six (6) MSG Configurations without any limitation on the number of transitions between the registered MSG Configurations in the Transition Matrix. If the Scheduling Coordinator registers seven (7) or more MSG Configurations, then the Scheduling Coordinator may only include two (2) eligible transitions between MSG Configurations for upward and downward transitions, respectively, starting from the initial MSG Configuration in the Transition Matrix. For each MSG Configuration, the responsible Scheduling Coordinator shall submit an Operational Ramp Rate and, as applicable, an Operating Reserve Ramp Rate and Regulating Reserves ramp rate, each of which shall have at least one (1) segment and no more than two (2) segments. The Scheduling Coordinator may submit changes to this information consistent with Sections 27.8.1 and 27.8.3, as they may apply.

\* \* \* \* \*

#### Section 29

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#### 29.4 Roles and Responsibilities

- (d) **EIM Participating Resources.** 
  - (1) Eligibility. The owner or operator of an EIM Resource is eligible to become an EIM Participating Resource if the EIM Resource –

- (A) meets the eligibility requirements established by the EIM Entity in whose Balancing Authority Area the resource is located or scheduled or to which it may be dynamically transferred; and
- (B) is capable of delivering Energy, Curtailable Demand, Demand Response Services, or similar services within the time specified by Section 29 for the Real-Time Market in which its EIM Participating Resource Scheduling Coordinator will submit Bids.
- (2) **EIM Participating Resource Agreement.** An EIM Participating Resource must execute an EIM Participating Resource Agreement.
- (3) **Obligations.** An EIM Participating Resource shall
  - (A) perform the obligations of an EIM Participating Resource under the EIM
     Participating Resource Agreement and Section 29;
  - (B) perform the obligations applicable to Market Participants and resources under the provisions of the CAISO Tariff described in Section 29.1(b);
  - (C) if it represents a Generating Unit, Load of a Participating Load, Proxy

    Demand Resource, or other qualified resource, perform the obligations required for the resource under the provisions of the CAISO Tariff described in section 29.1(b); and
  - (D) comply with all CAISO Tariff requirements associated with resource registration and the measurement and verification of the associated services to be provided for EIM Resources other than Generating Units or CAISO qualified resources delivering Energy.

#### 29.34 EIM Operations

\* \* \* \* \*

(e) EIM Resource Plan.

\* \* \* \* \*

(4) Contents of EIM Base Schedules. EIM Base Schedules of EIM Entities and EIM Sub-Entities must include hourly-level Demand Forecasts for EIM Demand, hourly-level schedules for resources, including any hourly-level schedules below PMin that the EIM Entity seeks an accounting for, and, for EIM Entities only, hourly-level scheduled Interchanges.

\* \* \* \* \*

(I) EIM Resource Sufficiency Evaluation – Capacity Test.

\* \* \* \* \*

(2) Supply and Demand Forecast. Conditions and actions in the Real-Time Market will affect what Supply will be counted and what Demand Forecast will be referenced in the capacity test performed in accordance with this Section 29.34(I) and, in some cases as noted below, both this capacity test and the flexibility test performed in accordance with Section 29.34(m).

- (B) For purposes of this Section 29.34(I) and also for purposes of Section 29.34(m) with respect to Section 29.34(I)(2)(B)(iii), Supply counted in the capacity test will not include—
  - (i) a Short Start Unit with a Bid in the RTM which received a Start-Up Instruction before the hour under evaluation and has failed to initiate Start-Up;
  - (ii) a Short Start Unit that is on Outage during the hour under evaluation or has returned from an Outage but is unable to Start-Up within the hour under evaluation; or
  - (iii) an Import Bid or Export Bid for delivery to or export from the CAISO Balancing Authority Area lacking a transmission profile in a submitted E-Tag supporting its Interchange Schedule at the time the final binding capacity test and flexibility test for the CAISO Balancing Authority Area are performed in accordance with Section 29.34(m).

- (n) Effect of EIM Resource Capacity or Flexibility Insufficiency.
  - (1) Insufficient Capacity. If, after the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules as provided in Section 29.34(f)(1)(c), the EIM Resource Plan or the CAISO equivalent has insufficient Supply as determined according to Section 29.34(I) -
    - (A) the CAISO will not include the EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area in the Uncertainty Requirement for the

- group of Balancing Authority Areas that passes both the capacity test and flexibility tests in the upward and downward directions, as applicable; and
- (B) the CAISO will hold the EIM Transfer limit into or from the EIM Entity
  Balancing Authority Area or the CAISO Balancing Authority Area, as
  specified in Section 29.34(n)(2), at the less restrictive of the value for the
  last 15-minute interval with sufficient Supply balance or the hourly RealTime EIM Base Schedule corresponding to the 15-minute interval with
  insufficient Supply as described in the business practice manual.
- (C) To facilitate procurement of the Flexible Ramping Product and determination of the Uncertainty Requirement in the manner provided by Section 44.2.4 within the existing RTUC processes and along the time intervals for RTUC runs set forth in Section 34.3.1 and further explained in the Business Practice Manual for Market Operations, and solely for the purpose of this subsection 29.34(n)(1), the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules for the first fifteenminute interval of each hour will be that provided in Section 29.34(f)(1)(B) and the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the remaining intervals of each hour will be that provided in Section 29.34(f)(1)(C).
- (2) Insufficient Flexible Ramping Capacity. If, after the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules or the CAISO equivalent as provided in Section 29.34(f)(1)(c), the CAISO determines -
  - (A) that an EIM Entity Balancing Authority Area or the CAISO Balancing

    Authority Area has insufficient upward Ramping capacity according to

    Section 29.34(m), the CAISO will take the actions described in Section

- 29.34(n)(1)(A) and (B) in the upward and into the EIM Entity BAA or CAISO BAA direction; and
- (B) that an EIM Entity Balancing Authority Area or the CAISO Balancing
  Authority Area has insufficient downward Ramping capacity according to
  Section 29.34(m), the CAISO will take the actions described in Section
  29.34(n)(1)(A) and (B) in the downward and from the EIM Entity BAA or
  CAISO BAA direction.
- (C) To facilitate procurement of the Flexible Ramping Product and determination of the Uncertainty Requirement in the manner provided by Section 44.2.4 within the existing RTUC processes and along the time intervals for RTUC runs set forth in Section 34.3.1 and further explained in the Business Practice Manual for Market Operations, and solely for the purpose of this subsection 29.34(n)(2), the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules for the first fifteenminute interval of each hour will be that provided in Section 29.34(f)(1)(B) and the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the remaining intervals of each hour will be that provided in Section 29.34(f)(1)(C).

#### (3) Assistance Energy Transfers.

(A) In General. A Balancing Authority Area in the EIM Area may obtain assistance Energy transfers into its Balancing Authority Area prior to December 31, 2025 if its Scheduling Coordinator has elected to accept automatically incremental EIM Transfer imports and pay the associated EIM Assistance Energy Transfer Surcharge following the failure of the upward capacity test in Section 29.34(I) or the upward flexibility test in Section 29.34(m) in accordance with the timelines and procedures

included in the Business Practice Manual for the Energy Imbalance
Market. Consistent with the requirements in the Business Practice
Manual, the CAISO will send a market notification prior to the CAISO
Balancing Authority Area accepting assistance Energy transfers as
provided in this section.

- (B) Assistance Energy Transfer Product. If a participating Balancing
  Authority Area in the EIM Area has opted-in to receive assistance Energy
  transfers consistent with the process requirements set forth in the
  Business Practice Manuals and the participating Balancing Authority
  Area fails the upward capacity test in Section 29.34(I) or the upward
  flexibility test in Section 29.34(m) then—
  - the Balancing Authority Area will not be subject to the capacity test or flexibility test failure consequences for EIM Transfers in Section 29.34(n);
  - the Balancing Authority Area will pay the EIM Assistance EnergyTransfer Surcharge according to Section 29.11(t).
- (C) Sunset Period. This tariff Section 29.34(n), together with Section29.11(t), will terminate on December 31, 2025.

\* \* \* \* \*

Section 30

#### 30.4.6.2.2 Methodology for Opportunity Cost Calculator

\* \* \* \* \*

Additional detail regarding the calculation of Opportunity Costs is provided in the Business Practice Manual. Any dispute regarding the calculation of Opportunity Costs will be subject to the CAISO ADR Procedures set forth in Section 13.

\* \* \* \* \*

#### Section 33

\* \* \* \* \*

#### 33.2.2 Implementation Date.

The CAISO and the prospective EDAM Entity shall work together to determine the EDAM Entity Implementation Date based on the complexity and compatibility of the Balancing Authority's transmission and technology systems with the CAISO systems and the planned timing of the CAISO's implementation of software enhancements. The EDAM Entity Implementation Date must be not less than six months after the date that the EDAM Entity Implementation Agreement between the CAISO and the Balancing Authority becomes effective in accordance with its terms. Once established, the EDAM Entity may request a change in the EDAM Entity Implementation Date to account for any circumstances that may affect the implementation timeline.

\* \* \* \* \*

#### Section 34

\* \* \* \* \*

#### 34.1.6 Eligible Intermittent Resources Forecast

#### 34.1.6.3 Hybrid Resources

The CAISO will use reasonable efforts to issue Real-Time Market Schedules that observe Hybrid Resources' Dynamic Limits, High Sustainable Limits, State of Charge, and production forecasts, as applicable. Hybrid Resources with a variable component may elect to receive a CAISO forecast to inform their bidding, or they may elect to use their own forecast.

\* \* \* \* \*

#### 34.3.1 RTUC Optimization

The Real-Time Unit Commitment (RTUC) process uses SCUC and is run every fifteen (15) minutes to make commitment decisions for Short Start Units having Start-Up Times for the next four to seven subsequent fifteen-minute intervals, depending on when during the hour the run occurs. For Multi-Stage Generating Resources the RTUC will issue a binding Transition Instruction separately from the binding Start-Up or Shut Down instructions. The RTUC can also be run with the Contingency Flag activated, in which case the RTUC can commit Contingency Only Operating Reserves. If RTUC is run without the Contingency Flag activated, it cannot commit Contingency Only Operating Reserves. RTUC is run at the following time intervals: (1) at approximately 12 minutes prior to the first Trading Hour, to serve as the HASP run, for T-45 minutes to T+60 minutes; (2) at approximately 7.5 minutes into the current hour for T-30 minutes to T+60 minutes; (3) at approximately 22.5 minutes into the current hour for T-15 minutes to T+60 minutes; and (4) at approximately 37.5 minutes into the current hour for T to T+60 minutes, where T is the beginning of the next Trading Hour. The HASP is a special RTUC run that is performed at approximately 71.5 minutes before each Trading Hour and has the additional responsibility of predispatching Energy and awarding Ancillary Services for HASP Block Intertie Schedules. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the RTUC and the FMM taking into consideration the impacts of the

derate or outage on the available MSG Configurations. Not all resources identified as needed in a given RTUC run will necessarily receive CAISO commitment instructions immediately, because during the Trading Day the CAISO may issue a commitment instruction to a resource only at the latest possible time that allows the resource to be ready to provide Energy when it is expected to be needed.

\* \* \* \* \*

#### 34.18.1 Dispatch of Self-Provided Ancillary Services

The Scheduling Coordinator scheduling an Interruptible Import will be responsible for Operating Reserves associated with the Interruptible Import, regardless of whether the Scheduling Coordinator is an LSE or not. For all other Submissions to Self-Provide an Ancillary Service, the Energy Bid shall be used to determine the Dispatch, subject to the limitation on the Dispatch of Spinning Reserve and Non-Spinning Reserve set forth in Section 34.18.2.2.

\* \* \* \* \*

#### Section 36

\* \* \* \* \*

#### 36.8.2 Load Eligible For CRRs And Eligible CRR Sinks

Any entity that wishes to participate in the CRR Allocation process must provide information that demonstrates that it has an obligation to serve load. An LSE's eligibility for allocation of CRRs is measured by the quantity of Load that it serves that is exposed to Congestion Charges for the use of the CAISO Controlled Grid as determined in Sections 36.8.2.1 and 36.8.2.2. An OBAALSE's eligibility for allocation of CRRs is also measured by the quantity of load that it serves that is exposed to Congestion Charges for the use of the CAISO Controlled Grid as determined in Section 36.9.3. For LSEs, the information necessary may include, but is not limited to, Settlement Quality Meter Data or relevant documents filed with the California Energy Commission. For OBAALSEs, the necessary information may include, but is not limited to, historical tagged Real-Time Interchange Export Schedules and historical load

data reflecting the load they serve that is exposed to Congestion Charges for the use of the CAISO Controlled Grid. In addition, each such OBAALSE shall support its data submission with a written sworn affidavit by an executive authorized to represent the OBAALSE attesting to the accuracy of the data, and the CAISO will have the right to audit the raw data and calculations used to develop the submitted data set. An LSE serving internal Load is eligible for CRRs up to its Seasonal CRR Eligible Quantity or Monthly CRR Eligible Quantity, which is derived from its Seasonal CRR Load Metric or Monthly CRR Load Metric as described in Sections 36.8.2.1 and 36.8.2.2, respectively. Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities for Qualified OBAALSEs are determined as provided in Section 36.9.3. These quantities are calculated for each LSE or Qualified OBAALSE separately for each combination of season and time of use period for the annual CRR Allocation process, and for each time of use period for each monthly CRR Allocation process, and for each CRR Sink at which the eligible LSE serves Load or the Qualified OBAALSE exports Energy from the CAISO Balancing Authority Area. MSS eligibility for CRRs will account for net or gross MSS Settlement in accordance with Section 4.9.13.1. If the MSS Operator elects net Settlement, LSEs for such MSS Load shall submit CRR Sink nominations at the MSS LAP. If the MSS elects for gross Settlement, LSEs for such MSS Load shall submit CRRs Sink nominations at the applicable Default LAP. Load that is Pumped-Storage Hydro Units but is not Participating Load may be scheduled and settled at a PNode or Custom Load Aggregation Point and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode or Custom Load Aggregation Point. Load that is a Participating Load that is also aggregated is scheduled and settled at a Custom Load Aggregation Point that is customized specifically for such Load and, therefore, LSEs for such Participating Load shall submit CRR Sink nominations at the Custom Load Aggregation Point. Load that is Participating Load is scheduled and settled at an individual PNode, and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode. Load that is non-Participating Load, and (i) is not Load associated with Pumped-Storage Hydro Units, (ii) is not Load associated with ETCs, TORs, or (iii) is not Load associated with MSS Operators that elect net Settlement, will be scheduled and settled at the Default LAP. Therefore, LSEs for such Load shall submit CRR Sink nominations at their assigned Default LAP or Default LAPs if the Load they serve is located in more than one Default LAP. In tier 2 and tier 3 of the annual process and tier 1 and tier 2 of the monthly process,

such LSEs may also submit CRR Sink nominations at a Sub-LAP of their assigned Default LAP. The CAISO will make available a list of allowable CRR Sources and Sinks to be used in the allocation at approximately the same time as the CAISO releases each CRR FNM. The allowable CRR Sinks will be consistent with the applicable CRR FNM. In the event that unforeseen changes to network conditions arise after the initial release of the list of allowable CRR Sinks and warrant revisions to that list, the CAISO will provide updates to the list prior to the closing of nominations for the CRR Allocation.

#### 36.8.2.1 Seasonal CRR Eligible Quantity

Where feasible, the CAISO constructs Load duration curves by season and time of use periods for the annual CRR Allocation process for each LSE based on meter data already within the CAISO's possession. If the CAISO does not possess the needed meter data or it is otherwise not feasible for the CAISO to calculate the Load duration curves based on data within its possession, then the Load duration curves will be based on the LSE's submission to the CAISO of its historical hourly Load data for the prior year, for each LAP within which the LSE serves Load. For load that is subject to variable and difficult-topredict hydrological conditions, the LSE has the option to submit the load's five-year rolling average historical hourly load data and the CAISO will use the submitted five-year average data for constructing the load duration curves. Once the LSE has exercised this option, the LSE must continue to submit fiveyear rolling average historical hourly load data for the annual CRR Allocation process in subsequent years. An LSE's Seasonal CRR Load Metric for each season and time of use period is the MW level of Load that is exceeded only in 0.5% of the hours based on the LSE's historical Load data. In the event that the LSE has lost or gained net Load through Load Migration during the course of the prior year, the Seasonal CRR Load Metric will be adjusted to reflect the loss or gain in accordance with the applicable BPM. The CAISO calculates an LSE's Seasonal CRR Eligible Quantity by first adjusting that LSE's Seasonal CRR Load Metric based on load migration and subtracting the quantity of Load served by its TORs, ETCs, and Converted Rights to form the LSE's Adjusted Load Metric, and then multiplying the result by 0.75.

#### 36.8.2.2 Monthly CRR Eligible Quantity

#### 36.8.2.2.2 Based on Historical Load Data

The Monthly CRR Load Metric for an LSE that serves Load that is eligible for CRRs but whose Load forecast is not verifiable in accordance with Section 36.8.6 is established based on five (5) years of prior hourly historical Load data for that Load for the same applicable month. The LSE must provide the historical Load data to the CAISO if the CAISO does not possess that data. Such LSE may submit fewer years of historical data for that Load if granted a waiver by the CAISO because five (5) years of such Load data does not exist. Each month the CAISO will use the hourly historical Load data for the relevant month to calculate two (2) Load duration curves for each year of historical Load data (one on-peak and one off-peak Load duration curve for the applicable month) for each CRR Sink in which such Load is located. For each Load duration curve, the CAISO will calculate the MW level of Load that is exceeded only in 0.5% of the hours. The CAISO will calculate an LSE's Monthly CRR Eligible Quantity for each on-peak and off-peak period for such Load by averaging the 0.5% exceeded values for the five years of data (or fewer years, if the CAISO does not possess five years of data and the CAISO granted the LSE waiver to submit fewer than five years of data), and then subtracting the quantity of Load served by its TORs, ETCs, and Converted Rights.

\* \* \* \* \*

#### 36.11.2 Procedure for Allocating Merchant Transmission CRRs

No less than forty-five (45) days prior to the in-service date of a Merchant Transmission Facility, the Project Sponsor of the facility will inform the CAISO of the In-Service Date of the facility and that the Project Sponsor will be requesting Merchant Transmission CRRs associated with the Merchant Transmission Facility. The CAISO will complete the Merchant CRR Allocation as soon as feasible after the In-Service Date of the facility. The effective date of any such allocated Merchant Transmission CRRs is prospective and the Merchant Transmission CRRs are not settled retroactive back to the In-Service Date.

#### Appendix A

\* \* \* \* \*

#### - Available Transfer Capability (ATC)

The available capacity of a given transmission path, in MW, after subtraction from that path's Total Transfer Capability of capacity associated with Existing Contracts and Transmission Ownership Rights and any Transmission Reliability Margin, as established consistent with CAISO and WECC transmission capacity rating guidelines, as further described in Appendix L-1.

\* \* \* \* \*

#### - Capacity Benefit Margin (CBM)

The factor defined in Appendix L-1.

\* \* \* \* \*

#### - EIM Upward Available Balancing Capacity

Any upward capacity from an EIM Participating Resources or a non-participating resource that an EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator has identified in the EIM Resource Plan as available to address power balance and transmission violations in the EIM Balancing Authority Area.

\* \* \* \* \*

#### - Transmission Reliability Margin (TRM)

A factor described in Appendix L-1.

\* \* \* \* \*

#### **Appendix B.19**

**EIM Participating Resource Agreement (EIMPRA)** 

#### **ARTICLE IV**

#### **CAISO TARIFF**

**4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EIM Participating Resource shall abide by, and shall perform all of the obligations under the CAISO Tariff placed on EIM Participating Resources in respect of all matters set forth therein.

\* \* \* \* \*

#### Appendix F

**Rate Schedules** 

Schedule 1

**Grid Management Charge** 

#### Part A - Calculation of Grid Management Charge (GMC)

\* \* \* \* \*

2. The rate for the System Operations Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by forecast annual gross absolute value of MWh of real-time energy flows on the ISO Controlled Grid.

\* \* \* \* \*

#### Part E - [Not used]

#### Schedule 3

#### **Regional Access Charge and Wheeling Access Charge**

\* \* \* \* \*

- 8.2 Any refund associated with a Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced in the CAISO Market Invoice.
- 8.3 If the Participating TO withdraws one or more of its transmission facilities from the CAISO Operational Control in accordance with Section 3.4 of the Transmission Control Agreement, then the CAISO will no longer collect the TRR for that transmission facility through the CAISO's Access Charge effective upon the date the transmission facility is no longer under the Operational Control of the CAISO. The withdrawing Participating TO shall be obligated to provide the CAISO with all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR. The CAISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from CAISO Operational Control.

\* \* \* \* \*

Participating TO will make the appropriate filings at FERC to establish its Transmission Revenue Requirement for its Local Access Charge, and to obtain approval of any changes thereto. All such filings with the FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Local Access Charge. The Non-Load-Serving Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

Federal power marketing agencies whose transmission facilities are under CAISO Operational Control shall develop their Local Transmission Revenue Requirements pursuant to applicable

federal laws and regulations, including filing with FERC. All such filings with FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Access Charges. The procedures for public participation in a federal power marketing agency's ratemaking process shall be posted on the federal power marketing agency's website. The federal power marketing agency shall also post on the website the Federal Register Notices and FERC orders for rate making processes that impact the federal power marketing agency's Local Transmission Revenue Requirement.

\* \* \* \* \*

#### Appendix K

#### **Ancillary Service Requirements Protocol (ASRP)**

#### PART A

#### **CERTIFICATION FOR REGULATION**

The requirements set forth in this Attachment K may be satisfied by the Ancillary Service Requirements Provider, an applicant to become an Ancillary Service Requirements Provider, or the applicable Scheduling Coordinator by following the process and procedures set forth in the Business Practice Manual.

A 1 An Ancillary Service Provider wishing to provide Regulation as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision arrangement must meet the following operating characteristics and technical requirements in order to be, and remain, certified by the CAISO to provide Regulation service unless granted a temporary exemption by the CAISO in accordance with criteria which the CAISO shall publish on the CAISO Website;

- A 2 An Ancillary Service Provider wishing to be considered for certification for Regulation service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Regulation service.
- A 3 No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of required interface equipment for Regulation, including a standard CAISO direct communication and direct control system.

- A 4 The Ancillary Service Provider may propose alternatives that it believes may provide an equivalent level of communication and control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.
- A 5 The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six (6) weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process.
- A 6 Upon agreement as to any alternative method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing. If agreed by the CAISO, the Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication and control.
- A 7 Design, acquisition, and installation of the CAISO-approved communication and control equipment shall be under the control of the CAISO. The CAISO shall bear no cost responsibility or functional responsibility for such equipment, except that the CAISO shall arrange for and monitor the maintenance of the communication and control system at the Ancillary Service Provider's expense, unless otherwise agreed by the CAISO and the Ancillary Service Provider. The CAISO shall be responsible for the design, acquisition and installation of any necessary modifications to the CAISO EMS at its own cost.
- A 8 The CAISO, in cooperation with the Ancillary Service Provider shall perform testing of the communication and control equipment to ensure that the communication and control system performs to meet the CAISO requirements.
- When the CAISO is satisfied that the communication and control systems meet the CAISO's requirements, the Ancillary Service Provider shall request in writing that the CAISO conduct a certification test with a suggested primary date and time and at least two (2) alternative dates and times. The CAISO shall, within two (2) Business Days of receipt of the Ancillary Service Provider's request, accept a proposed time if possible or suggest at least three (3) alternatives to the Ancillary Service Provider. If the CAISO responds by suggesting alternatives, the Ancillary Service Provider shall, within two (2) Business Days of receipt of the CAISO's response, respond in turn by accepting a proposed alternative if possible or suggesting at least three (3) alternatives, and this procedure shall continue until agreement is reached on the date and time of the test. The Ancillary Service Provider shall inform its Scheduling Coordinator of the agreed date and time of the test.
- A 10 Testing shall be performed by the CAISO, with the cooperation of the Ancillary Service Provider. Such tests shall include, but not be limited to, the following:
  - (a) confirmation of control communication path performance;
  - (b) confirmation of voice circuit for receipt of Dispatch Instructions;
  - (c) confirmation of the resource's control performance; and

- (d) confirmation of the CAISO EMS control to include changing the resource operating level over the range of Regulation proposed at different set points, from minimum to maximum, and at different rates of change from the minimum to the maximum permitted by the design of the resource.
- A 10.1 Testing for Non-Generator Resources requesting the use of Regulation Energy Management shall include a market simulation as described in the CAISO's Operating Procedures.
- A 11 Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Regulation as an Ancillary Service Provider. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Regulation.
- A 12 The Scheduling Coordinator may submit Bids for Regulation service from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the second Trading Day after the CAISO's database reflects the resource's certificate.
- A 13 The certification to provide Regulation shall remain in force, subject to suspension, until:
  - (a) withdrawn by the Scheduling Coordinator or the Ancillary Service
    Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day; or
  - (b) if the resource obtained CAISO certification on the basis of a prior communication and control technology, until revoked by the CAISO for failure to comply with the requirement set forth in A 13.1 that the resource install a CAISO-specified standard CAISO direct communication and direct control system (unless exempted by the CAISO).
- A 13.1 Unless exempted by the CAISO, if the resource obtained CAISO certification on the basis of a prior communication and control technology, the CAISO shall provide written notice to the Ancillary Service Provider of the Ancillary Service Provider's obligation to install a CAISO-specified standard direct communication and direct control system along with a required date for said work to be completed as mutually agreed upon by the CAISO and the Ancillary Service Provider. Failure to meet the completion date shall be grounds for the revocation of certification, provided that the CAISO must provide the Ancillary Service Provider with at least ninety (90) days advance notice of the proposed revocation.
- **A 14** The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

#### **PART B**

#### **CERTIFICATION FOR SPINNING RESERVE**

An Ancillary Service Provider wishing to provide Spinning Reserve as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision

arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Spinning Reserve service:

\* \* \* \* \*

- An Ancillary Service Provider wishing to be considered for certification for Spinning Reserve service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Spinning Reserve service.
- B 3 No later than one week after receipt of the request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Spinning Reserve.
- B 4 The Ancillary Service Provider may elect to implement any of the approved options defined by the CAISO, and, if it wishes to proceed with its request for certification, shall give written notice to the CAISO of its selected communication option.
- When it receives the Ancillary Service Provider notice, the CAISO shall notify the Ancillary Service Provider in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment, the Ancillary Service Provider may proceed as indicated below to secure the necessary facilities and capabilities required.
- The Ancillary Service Provider may also propose alternatives that it believes may provide an equivalent level of control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.
- B 7 The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process.
- B 8 Upon agreement as to the method of communication and control to be used by the resource, the CAISO shall provisionally approve the Ancillary Service Provider's proposal in writing. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication.

\* \* \* \* \*

B 13 Upon successful completion of the test the CAISO shall certify the resource as being permitted to provide Spinning Reserve as an Ancillary Service Provider. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Spinning Reserve.

- B 14 The Scheduling Coordinator may bid Spinning Reserve from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the Second Trading Day after the CAISO's database reflects the resource's certificate.
- The certification to provide Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day.
- **B 16** The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

#### PART C

#### **CERTIFICATION FOR NON-SPINNING RESERVE**

An Ancillary Service Provider wishing to provide Non-Spinning Reserve as an Ancillary Service from a resource whether pursuant to the CAISO's auction or as part of a self-provision arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Non-Spinning Reserve service:

- An Ancillary Service Provider wishing to be considered for certification for Non-Spinning Reserve service must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Non-Spinning Reserve.
- C 4 No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Non-Spinning Reserve..
- C 5 The Ancillary Service Provider may elect to implement any of the acceptable communication options and interface equipment options. The Ancillary Service Provider shall give written notice to the CAISO of its selected communication option and interface equipment option.
- When it receives the Ancillary Service Provider's notice, the CAISO shall notify the Ancillary Service Provider in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment the Ancillary Service Provider may proceed as indicated below to secure the necessary facilities and capabilities required.
- C 7 The Ancillary Service Provider may also propose alternatives that it believes may provide an equivalent level of control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.
- The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process.

C 9 Upon agreement as to the method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication. \* \* \* \* \* C 14 Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Non-Spinning Reserve as an Ancillary Service. The Scheduling Coordinator shall request the CAISO to update its database to reflect the permission for the resource to provide Non-Spinning Reserve. C 15 The Scheduling Coordinator may bid Non-Spinning Reserve service from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the second Trading Day after the CAISO database reflects the resource's certificate. C 16 The certification to provide Non-Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day. C 17 The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

\* \* \* \* \*

#### **Appendix L-1**

The provisions of this Appendix L-1 apply to the calculation of ATC to establish Wheeling Through Priorities that will be effective beginning June 1, 2024 and thereafter.

Appendix L-1 Method to Assess Available Transfer Capability

\* \* \* \* \*

L.1.3.1 Transmission Capacity for ETC and TOR – The CAISO uses the ETC Reservations Calculator (see Section L.1.3.1.1) to reserve transmission capacity for each ETC and TOR based on TRTC Instructions the responsible Participating Transmission Owner or Non-Participating Transmission Owner submits to the CAISO as to the amount of firm transmission capacity that should be reserved on each Transmission Interface for each hour of the Trading Day in accordance with Sections 16 and 17 of the CAISO Tariff. The types of TRTC Instructions the CAISO receives generally fall into three basic categories:

- The ETC or TOR reservation is a fixed percentage of the TTC on a line, which decreases as the TTC is derated (ex. TTC = 300 MW, ETC fixed percentage = 2%, ETC = 6 MWs, TTC derated to 200 MWs, ETC = 4 MWs);
- The ETC or TOR reservation is a fixed amount of capacity, which decreases if the line's TTC is derated below the reservation level (ex. ETC = 80 MWs, TTC declines to 60 MW, ETC = TTC or 60 MWs; or
- The ETC or TOR reservation is determined by an algorithm that changes at various levels of TTC for the line (ex. Intertie TTC = 3,000 MWs, when line is operating greater than 2,000 MWs to full capacity ETC = 400 MWs, when capacity is below 2000 MWs ETC = TTC/2000\* ETC).

Existing Contract capacity reservations remain reserved during the Day-Ahead Market and HASP. To the extent the reservations are unused after the HASP, then the capacity reservations are released for the remaining Real-Time Market processes conducted for the given Trading Hour.

\* \* \* \* \*

#### Appendix P

\* \* \* \* \*

#### **5 Duties of Market Monitor**

#### 5.1 Review of Market Rules

DMM shall review existing and proposed market rules, tariff provisions, and market design elements and recommend proposed rule and tariff changes to the CAISO, the CAISO Governing Board, FERC staff, the California Public Utilities Commission, Market Participants, and other interested entities.

\* \* \* \* \*

#### Appendix U

AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO LARGE GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS

Appendix 7 Agreement for Allocating LGIP and Study Responsibilities

\* \* \* \* \*

# ATTACHMENT A INTERCONNECTION STUDY RESPONSIBILITY ALLOCATION

#### Interconnection Feasibility Study Timeline

(1) Load Flow	Typical Calendar Days	Typical Cumulative Days		
CAISO directs PTO(s) to Develop draft Base Cases (Milestone)	0	0		
PTO(s) develop draft Base Cases and deliver to CAISO	7	7		
CAISO reviews Base Cases and provides direction to PTO(s) At the direction of the CAISO, PTO(s) develops contingency lists and provide to CAISO.	7	14		
PTO incorporates CAISO directions into Base Cases; CAISO approves Base Cases; CAISO reviews and approves contingency lists. If there is disagreement on the contingency list, the CAISO and PTO(s) must coordinate to revise the contingency list. CAISO approves the contingency list.	7	21		
CAISO performs Load Flow & prepares summary results of impacted systems (other PTO(s) or Affected Systems) and submits results to impacted systems. Such results may include CAISO proposed solutions for mitigation to any violations uncovered in the Load Flow study.	7	28		
Impacted PTO(s) review CAISO results and recommend mitigation solutions as appropriate.	5	33		
Short Circuit Duty (concurrent with Load Flow Activity)				
At the CAISO's direction, PTO(s) develop Base Case, and run short circuit analyses.	10	10		
PTO(s) to perform facilities review	18	28		
PTO(s) prepare draft study results and submit to the CAISO for review, recommendations and direction.	5	33		
(2) Facility cost estimates				
At the CAISO's direction, PTO(s) to prepare non-binding cost estimates and schedule for the direct assignment facilities and network upgrades identified in the power flow and short circuit duty analyses.	7	40		
Finalizing Report				
At the CAISO's direction, PTO(s) to prepare draft report for impacts in their service territory.	5	45		
CAISO compiles all results into a draft report that covers grid impacts.	5	50		
PTO(s) reviews CAISO integrated report and provides comments to CAISO.	4	54		
CAISO incorporates PTO(s) comments. If PTO(s') comments conflict with CAISO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in final report.	6	60		
CAISO provides final CAISO approved report to IC, impacted PTOs, and any applicable Affected Systems. (Milestone)	0	0		
(3) Load Power Flow	Typical Calendar Days	Typical Cumulative Days		
CAISO directs PTO(s) to Develop draft Base Cases (Milestone)	0	0		

PTO(s) develop draft Base Cases and deliver to CAISO	7	7	
CAISO reviews Base Cases and provides direction to PTO(s) At the direction of the CAISO, PTO(s) develops contingency lists and provide to CAISO.	7	14	
PTO incorporates CAISO directions into Base Cases; CAISO approves Base Cases; CAISO reviews and approves contingency lists. If there is disagreement on the contingency list, the CAISO and PTO(s) must coordinate to revise the contingency list. CAISO approves the contingency list.	7	21	
CAISO performs Load Flow & prepares summary results of impacted systems (other PTO(s) or Affected Systems) and submits results to impacted systems. Such results may include CAISO proposed solutions for mitigation to any violations uncovered in the Load Flow study.	7	28	
Impacted PTO(s) review CAISO results and recommend mitigation solutions as appropriate.	5	33	
Short Circuit Duty (concurrent with Load Flow Activity)			
At the CAISO's direction, PTO(s) develop Base Case, and run short circuit analyses.	10	10	
PTO(s) to perform facilities review	18	28	
PTO(s) prepare draft study results and submit to the CAISO for review, recommendations and direction.	5	33	
(4) Facility cost estimates			
At the CAISO's direction, PTO(s) to prepare non-binding cost estimates and schedule for the direct assignment facilities and network upgrades identified in the power flow and short circuit duty analyses.	7	40	
Finalizing Report			
At the CAISO's direction, PTO(s) to prepare draft report for impacts in their service territory.	5	45	
CAISO compiles all results into a draft report that covers grid impacts.	5	50	
PTO(s) reviews CAISO integrated report and provides comments to CAISO.	4	54	
CAISO incorporates PTO(s) comments. If PTO(s') comments conflict with CAISO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in final report.	6	60	
CAISO provides final CAISO approved report to IC, impacted PTOs, and any applicable Affected Systems. (Milestone)	0	0	

#### Interconnection System Impact Study Timeline

Standard System Impact Study Load Flow/Post Transient/Stability Process	Typical Calendar Days	Typical Cumulative Days
At the CAISO's direction, PTO(s) develop draft Base Case(s)	0	0
PTO(s) develop(s) draft Base Case(s) and deliver(s) to CAISO	14	14
CAISO reviews Base Case(s) and provides direction to PTO	7	21
At the CAISO's direction, PTO develops contingency lists	,	21
PTO incorporates CAISO's directions into Base Cases		
CAISO approves Base Case(s)	7	28
CAISO reviews and approves contingency lists		
At the CAISO's direction, the PTO may perform the ISIS Load		
Flow, Post Transient and Stability analyses & prepare	21	49
mitigation solutions, as appropriate and submits draft study results to CAISO for review and direction*.		
potentially impacted PTOs may, as part of the review process, por review or validate Load Flow, Post Transient and Stability Analyst and recommend alternative solutions. (In the case of this election substituted for "PTO" for remainder of ISIS process.)	sis to assess C	AISO results
PTO develops or supplements CAISO proposed mitigation		
plans and/or develops alternative mitigation plans for consideration, as appropriate, and submits to CAISO for review and direction	14	63
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)	14	63
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2	14 n/a	63 n/a
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility	1	
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit	n/a	n/a
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis	n/a 21 35	n/a 21 56
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis  PTO to perform facilities review  PTO to prepare draft study results and submits to the CAISO for review and direction	n/a 21	n/a 21
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis  PTO to perform facilities review  PTO to prepare draft study results and submits to the CAISO for review and direction  Facility cost estimates and schedules	n/a 21 35	n/a 21 56
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis  PTO to perform facilities review  PTO to prepare draft study results and submits to the CAISO for review and direction	n/a 21 35	n/a 21 56
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis  PTO to perform facilities review  PTO to prepare draft study results and submits to the CAISO for review and direction  Facility cost estimates and schedules  At the CAISO direction, PTO(s) to prepare cost estimates and schedules for the direct assignment facilities and network upgrades identified in the ISIS power flow, short circuit duty,	n/a 21 35 7	n/a 21 56 63
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis  PTO to perform facilities review  PTO to prepare draft study results and submits to the CAISO for review and direction  Facility cost estimates and schedules  At the CAISO direction, PTO(s) to prepare cost estimates and schedules for the direct assignment facilities and network upgrades identified in the ISIS power flow, short circuit duty, post transient, and stability studies.  Final Report  At the CAISO's direction, PTO(s) prepares draft report for impacts in their service territory.	n/a 21 35 7 20	n/a 21 56 63
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis  PTO to perform facilities review  PTO to prepare draft study results and submits to the CAISO for review and direction  Facility cost estimates and schedules  At the CAISO direction, PTO(s) to prepare cost estimates and schedules for the direct assignment facilities and network upgrades identified in the ISIS power flow, short circuit duty, post transient, and stability studies.  Final Report  At the CAISO's direction, PTO(s) prepares draft report for impacts in their service territory.	n/a 21 35 7 20	n/a 21 56 63
consideration, as appropriate, and submits to CAISO for review and direction  Short Circuit Duty (concurrent with the LF/PT/S)  CAISO to coordinate with other potentially affected facility owners2  CAISO directs PTO to develop Base Case and run short circuit analysis  PTO to perform facilities review  PTO to prepare draft study results and submits to the CAISO for review and direction  Facility cost estimates and schedules  At the CAISO direction, PTO(s) to prepare cost estimates and schedules for the direct assignment facilities and network upgrades identified in the ISIS power flow, short circuit duty, post transient, and stability studies.  Final Report  At the CAISO's direction, PTO(s) prepares draft report for	n/a 21 35 7 20	n/a 21 56 63

Standard System Impact Study Load Flow/Post Transient/Stability Process	Typical Calendar Days	Typical Cumulative Days
PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.  PTO submits final draft report less the deliverability results to the CAISO. The CAISO will finalize the report and tender the CAISO approved report to the IC after incorporating Deliverability Assessment results.	14	113
CAISO Deliverability Assessment (concurrent with other studies) Assessment process pursuant to LGIP Section 3.3.3, the CAISO pursuant to LGIP Section 3.3.2 to determine potential operating I due to constraints under a variety of system conditions.	may also perf	orm studies
PTO provides GE PSLF compatible change files for all project changes since last Deliverability Assessment, including subject LGIP project.	14	14
CAISO incorporates project changes into Deliverability Assessment Base Case.	7	21
CAISO provides Deliverability Assessment & prepares results summary.	14	35
CAISO provides initial Deliverability Assessment results with no upgrades and upgrades necessary for full deliverability	14	49
CAISO reviews Load Flow, post transient, and stability analysis mitigation options. (The timing of this action should be in sync with completion of Load Flow study results)	11	60
CAISO has the opportunity to revise Delivery Network Upgrades necessary for full deliverability, based on optimization with LF results.	7	67
At the CAISO's direction, PTO to provide deliverability related upgrade costs and schedules, as appropriate. (This action should occur when PTO is performing cost analysis for Load Flow and Short Circuit Duty upgrades)	16	83
CAISO drafts Deliverability Assessment results.	7	90
PTO reviews/comments on Deliverability Assessment results.	12	102
CAISO incorporates PTO comments on the Deliverability Assessment results, as appropriate. Any remaining conflicts must be noted in final report.	11	113
Final Study Report		
CAISO provides final approved report to IC, PTO, and any applicable affected systems.	7	120

#### Appendix X

#### **Approved Project Sponsor Agreement (APSA)**

\* \* \* \* \*

#### ARTICLE 10. COST RECOVERY, BILLING, AND PAYMENT

10.1 Transmission Revenue Requirement. The Approved Project Sponsor may apply to FERC for a Transmission Revenue Requirement for transmission facilities not yet in operation, but approved under the transmission planning provisions of the CAISO Tariff, that will be Regional Transmission Facilities or Local Transmission Facilities when placed under the CAISO's Operational Control. If FERC approves such Transmission Revenue Requirement, the CAISO shall incorporate the Transmission Revenue Requirement into the Regional Access Charge or Local Access Charge in accordance with the CAISO Tariff. The Approved Project Sponsor acknowledges and agrees with the cost estimates and the binding cost cap, or other binding cost containment measures, if applicable, set forth in Appendix E.

[Include the following clause if the Approved Project Sponsor agrees to a cost cap or other binding cost containment measures.]

10.1.1 The Approved Project Sponsor agrees that it shall not seek, for recovery through its Transmission Revenue Requirement, higher costs than the maximum costs specified in, or determined in accordance with, any cost cap or other binding cost containment measures as specified in Appendix E except for costs incurred to comply with any additional specifications of the CAISO or Interconnecting PTO beyond the functional requirements for the transmission facility included in Appendix A to this agreement. The Approved Project Sponsor shall not seek recovery through its Transmission Revenue Requirement of any incentives or other costs that it has agreed to forego, as specified in Appendix E. The Approved Project Sponsor further agrees that the Transmission Control Agreement shall incorporate the Project cost cap or any other agreed-to binding cost containment measures agreed to or proposed by the Approved Project Sponsor. The provisions of this Section 10.1.1 shall survive termination of this Agreement.

\* \* \* \* \*

#### Appendix Y

For Interconnection Requests Generator Interconnection Procedures (GIP)

#### Attachment A Generating Facility Data To GIP

#### Appendix 1 Interconnection Request GENERATING FACILITY DATA

\* \* \* \* \*

#### TABLE 1

## TRANSFORMER DATA (Provide for each level of transformation)

UNIT\_\_\_\_\_

NUMBER OF TRA	ANSFORMERS	PHASE	
RATING	H Winding	X Winding	Y Winding
Rated MVA			
Connection (Delta, Wye, Gnd.)			
Cooling Type (OA,OA/FA, etc) :			
Temperature Rise Rating			
Rated Voltage			
BIL			
Available Taps (% of rating)			
Load Tap Changer? (Y or N)			
Tap Settings			
IMPEDANCE	H-X	H-Y	X-Y
Percent			
MVA Base			
Tested Taps			
WINDING RESISTANCE	Н	X	Y
Ohms			
CURRENT TRANSFORMER RATIOS	•		•

H\_\_\_\_\_ X\_\_\_\_ Y\_\_\_\_

Percent exciting current at 100 % Voltage;	110% Voltage
Supply copy of nameplate and manufactur	re's test report when available

#### Appendix 4

## AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS

\* \* \* \* \*

### Attachment A Interconnection Study Responsibility Allocation

\* \* \* \* \*

#### **Phase I Interconnection Study Timeline**

Line	Phase I Cluster Study	Typical Calendar Days	Timeline (Days)
1	CAISO and PTOs develop initial Generating Facility groups for initial Dispatch assumptions and cost allocation purposes (except for thermal overload and short circuit mitigation).	1	1
2	PTOs develop draft Base Cases, each representing all Generating Facilities in the queue cluster, and deliver to CAISO.	15	2-16
3	PTO develops preferred and alternative, if applicable, direct interconnection plans, including the need for an Interconnection Grid Substation (IGS).	15	2-16
4	PTO develops draft contingency lists.	15	2-16
5	CAISO reviews and approves Base Cases and direct interconnection plans and merges them together, as needed. PTOs update off-peak Base Cases.  CAISO reviews and approves contingency lists. PTO needs time to consider CAISO proposed changes.	5	17-21
6	CAISO provides Deliverability Assessment results identifying constrained facilities, using summer peak and off-peak Base Cases, and	15	22-36

		1	
	prepares results summary and may propose		
	mitigation plans for PTO review.		
	At the CAISO's direction, the PTO performs the off-		
	peak Load Flow, and summer peak and off-		
7	peak Post Transient and Stability analyses	15	22-36
	and identifies mitigation solutions, as		
	appropriate, and submits draft study results to		
	CAISO for review and direction.		
	PTO develops mitigation plans for summer peak and		
•	off-peak or supplements CAISO proposed	1	07.54
8	mitigation plans for consideration, as	15	37-51
	appropriate, and submits to CAISO for review		
	and direction		
•	CAISO retests Deliverability Assessment results with	_	
9	proposed Delivery Network Upgrades. PTO	5	52-56
	reviews and comments on retest results.		
4.0	CAISO develops shift factors for cost allocation	_	
10	purposes of all Network Upgrades associated	5	57-61
	with mitigating thermal overloads.		
Short C	ircuit Duty		
		1	1
11	CAISO coordinates with other potentially affected	n/a	n/a
	facility owners <sup>1</sup> .		- " -
	CAISO directs PTO to develop Base Case and run	10	57-66
12	short circuit analysis.		
	PTO performs facilities review. (Note: possibly for		
13	feedback into the power flow studies and PTO	10	67-76
	mitigation plans.)		
14	PTO prepares draft study results and submits to the	3	77-79
	CAISO for review and direction.		
Facility	cost estimates and schedules	1	
	At the CAISO's direction, PTO(s) prepares cost		
4.5	estimates and schedules for the direct	70	00.00
15	assignment facilities and Network Upgrades	78	22-99
	identified in the power flow, short circuit duty,		
Elizat D	post transient, and stability studies.		
Final R		П	
16	At the CAISO's direction, PTO(s) prepares draft report	83	22-104
	for impacts in its service territory.		
	CAISO compiles all results into a draft report that		
17	covers grid impacts, as appropriate. CAISO	10	105 111
17	reviews integrated draft report and submits	10	105-114
	comments, recommendations and direction to		
	the PTO.		
	PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions		
18	and recommendations. If CAISO conclusions and recommendations conflict with PTO		
	conclusions, then CAISO and PTO must		
	coordinate to resolve conflicts. Any remaining	10	115-124
	conflicts must be noted in the final report.	10	110-124
	PTO submits final draft report to the CAISO. The	+	
19	CAISO will finalize the report and tender the		
	CAISO will illialize the report and tender the CAISO approved report to the ICs.		
Final C	tudy Report		
ı ıııaı 3	ludy Nepoli		

20	CAISO provides final approved report to ICs, PTO, and any applicable Affected Systems.	10	125-134
	and any applicable Allected Systems.		

[footnote 1: In accordance with the WECC Short Circuit Duty Procedure]

# Phase II Interconnection Study Process\*\*

\*\*All Interconnection Studies will be under the direction and oversight of, and approval by, the CAISO and may involve more than one PTO.

Line	Standard Project Refinement and Facilities Study	Typical Calendar Days	Timeline (Days)
21	PTOs update Base Cases from Phase I Interconnection Study line 5 to remove projects that have withdrawn.	10	1-10
22	CAISO reviews and approves Base Cases.	5	11-15
23	CAISO and PTOs update studies performed in Phase I lines 6-14 using Base Cases from line 22.  Additional alternatives may be considered to address future generation development potential, meet load serving capability, and economic benefit objectives, and phased development and option value of transmission projects to address uncertainty.	75	16-90
23.1	Large Network Upgrades will be further evaluated within the Phase 2 transmission study process as set forth in Appendix 24 of the CAISO Tariff. The large Network Upgrades either (a) consist of new transmission lines requiring new rights of way, are 200 kV or above, and have capital costs of \$50 million or greater, or (b) are 500 kV substation facilities that have capital costs of \$50 million or greater.		
24	PTOs develop draft off-peak and summer peak operating year Base Cases as appropriate where each case includes all Generating Facilities in Phase II Interconnection Study having the same operating date and deliver to CAISO.  CAISO reviews and approves cases from line 24.	30	61-90
26	At the CAISO's direction, the PTOs perform operational studies using cases from line 25 to determine Network Upgrade requirements for each study year and identify any special operational requirements to connect projects in the year of study.	30	91-120
27	At the CAISO's direction, the PTOs perform additional operational studies to identify the optimal approach for building out the overall plan of service on a segmented (i.e. building block) basis acknowledging that portions of the	10	121-130

		1	
	overall plan of service may be staged in		
	segments over time.		
Final Pl	an of Service Report Including Facility Costs and Sch	nedules	
28	At the CAISO's direction, PTO(s) prepares draft plan of service report. At the CAISO's direction, PTO(s) to prepare detailed cost estimates and schedules for the direct assignment facilities and Network Upgrades identified in the overall plan of service and including individual segments.	75	91-165
29	CAISO reviews draft plan of service report and submits comments, recommendations and direction to the PTO.	10	166-175
30	PTO incorporates CAISO directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.	21	176-196
31	PTO submits final draft report to the CAISO. The CAISO will finalize the report.		
•		•	

# Appendix 5

# SCHEDULE FOR RELEASE AND REVIEW OF PER UNIT COSTS

Line	Schedule for the Release and Review of Per Unit Costs	Anticipated Calendar Date(s)
	Annual Review, Update, and Posting of Per Unit Costs	
	PTOs to review and update their per unit costs.	October – mid-January
	PTOs to provide their updated per unit costs to the CAISO for CAISO review and posting to the CAISO Website.	Mid-January

CAISO to review and post the PTO per unit costs to the CAISO Website for stakeholder review.	Third week of January
Provide two weeks for stakeholders to review the posted per unit costs.	Last week of January and first week of February
CAISO to schedule and conduct a one-day stakeholder meeting in February to discuss the posted per unit costs with stakeholders.	Second week of February
Provide two weeks following the scheduled stakeholder meeting for stakeholders to provide comments to the CAISO.	Last two weeks of February
Provide two weeks for CAISO and PTOs to review and address stakeholder comments.	First two weeks of March
Provide three weeks following the stakeholder meeting for PTOs to review, update as needed, and finalize their per unit costs.	First three weeks of March
PTOs to provide their final per unit costs to the CAISO for posting to the CAISO Website.	End of third week of March
CAISO to review and post the PTOs' final per unit costs to the CAISO Website.	Fourth week of March
Final per unit costs are posted and available for use to estimate the costs of Network Upgrades and Interconnection Facilities.	Last week of March to first of April

# **Appendix EE**

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# ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

\* \* \* \* \*

#### 5.19 Modification.

**5.19.1 General.** The Interconnection Customer or the Participating TO may undertake modifications to its facilities, subject to Section 25.1(c) and Section 25 of the CAISO Tariff if the Interconnection Customer has achieved its Commercial Operation Date, and subject to Section 6.7.2 of Appendix DD if it has not.

If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of

such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

At any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 6.7.2 of Appendix DD will still apply to such requests to reduce capacity.

\* \* \* \* \*

#### **Article 15. Notices**

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, conveyed by e-mail, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

- **15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.
- **15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given as provided in Article 15.1 may be so given by telephone, or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

\* \* \* \* \*

#### Appendix FF

**Article 1. Scope and Limitations of Agreement** 

# 1.5 Responsibilities of the Parties

1.5.1 The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice. The Parties shall use the applicable Large Generator Interconnection Agreement to interpret the responsibilities of the Parties under this Agreement.

\* \* \* \* \*

# **Article 13. Notices**

# 13.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, conveyed by e-mail, or sent by first class mail, postage prepaid, to the person specified below:

If to	the Interconnection Customer:		
	Interconnection Customer:		
	Attention:		
	Address:		
	City:	State:	Zip:
	Phone:	E-mail address:	<del></del>
If to	the Participating TO:		
	Participating TO:		· · · · · · · · · · · · · · · · · · ·
	Attention:		
	Address:		
	City:	State:	Zip:
	Phone:	_ E-mail address:	
If to	the CAISO:		
	California Independent Sys	stem Operator Corporation	
	Attention:		
	250 Outcropping Way		
	Folsom, CA 95630		
	Phone: 916-351-4400	E-mail address:	<del></del>
s.2 Billi	ing and Payment		
· ·		t to the addresses set out below:	
Inte	prophection Customer		
IIIC	Attention:		
	Attention:	· · · · · · · · · · · · · · · · · · ·	
	City:	State:	Zip:
	Oity	otate	Zip
Par	ticipating TO:		
Par	Attention:		
Par	Attention: Address:		

#### 13.3 Alternative Forms of Notice

Any notice or request required or permitted to be given by any Party to the other Parties and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and e-mail addresses set out below:

If to the Interconnection Customer: Interconnection Customer: Phone: E-mail address: If to the Participating TO: Participating TO: \_\_\_\_\_ Attention: Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_ Zip:\_\_\_\_ Phone: \_\_\_\_\_ E-mail address: If to the CAISO: California Independent System Operator Corporation Attention: 250 Outcropping Way Folsom, CA 95630 Phone: 916-351-4400 E-mail address:

#### 13.4 **Designated Operating Representative**

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative:

Interconnection Custom	er:	
Attention:		
Address:		
City:	State:	Zip:
Phone:	E-mail address:	
Participating TO:		
Attention:		· · · · · · · · · · · · · · · · · · ·
71110111		
Address:		

Phone:	E-mail address:
CAISO's Operating Representative	
California Independent Syste	em Operator Corporation
Attention:	
250 Outcropping Way	
Folsom, CA 95630	

# 13.5 Changes to the Notice Information

Any Party may change this information by giving five Business Days written notice to the other Parties prior to the effective date of the change.

# Attachment C – Marked Tariff 2024 Tariff Clarification Filing California Independent System Operator Corporation August 2, 2024

#### Section 4

\* \* \* \* \*

# 4.17.6 Operating Requirements

Distributed Energy Resource Aggregations will respond to (1) CAISO Dispatch Instructions and (2) instructions from the Utility Distribution Company to maintain the safety and reliability of the Distribution System. The CAISO may dispatch a Distributed Energy Resource Aggregation to the extent the Distributed Energy Resource Aggregation bids or schedules Energy or Ancillary Services into the CAISO Markets and receives an award. The CAISO may also issue an Exceptional Dispatch Instruction for the Distributed Energy Resource Aggregation for reliability pursuant to Section 34.110. Distributed Energy Resource Aggregations shall respond to Dispatch Instructions consistent with Generation Distribution Factors for the Distributed Energy Resource Aggregation.

\* \* \* \* \*

# Section 6

\* \* \* \* \*

# 6.5.5.1 Communications with Scheduling Coordinators

Communications between the CAISO and Scheduling Coordinators shall take place via the CAISO's secure communication system to a dedicated terminal at the Scheduling Coordinator's scheduling center. If there is a failure of electronic communications with a Scheduling Coordinator, then, at the CAISO's discretion, the Scheduling Coordinator may communicate by <a href="mailto:phone or other communication">phone or other communication</a> methodfacsimile. Communication that is not electronic by facsimile requires verbal approval by the CAISO.

#### Section 8

\* \* \* \* \*

# 8.4 Technical Requirements for Providing Ancillary Services

All Generating Units, System Units, Participating Loads, Proxy Demand Resources, and System Resources providing Ancillary Services shall comply with the technical requirements set out in Sections 8.4.1 to 8.4.3 below relating to their operating capabilities, communication capabilities and metering infrastructure. No Scheduling Coordinator shall be permitted to submit a Bid to the CAISO for the provision of an Ancillary Service from a Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource, or to provide a Submission to Self-Provide an Ancillary Service from a Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or Dynamic System Resource, unless the Scheduling Coordinator is in possession of a current certificate issued by the CAISO confirming that the Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource complies with the CAISO's technical requirements for providing the Ancillary Service concerned. Scheduling Coordinators can apply for Ancillary Services certificates in accordance with the requirements for considering and processing such applications in Appendix K and the CAISO's Operating Procedures. The CAISO shall have the right to inspect Generating Units, Participating Loads, Proxy Demand Resources, or the individual resources comprising System Units and other equipment for the purposes of the issue of a certificate and periodically thereafter to satisfy itself that its technical requirements continue to be met. If at any time the CAISO's technical requirements are not being met, the CAISO may suspend or withdraw the certificate for the Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource concerned.

\* \* \* \* \*

#### Section 27

#### 27.8.2 Informational Requirements

As part of the registration process described in Section 27.8.1, the Scheduling Coordinators for Generating Units that seek to qualify as Multi-Stage Generating Resources must submit to the CAISO a Transition Matrix, which contains the Transition Costs and operating constraints associated with MSG Transitions. The Scheduling Coordinator may register up to six (6) MSG Configurations without any limitation on the number of transitions between the registered MSG Configurations in the Transition Matrix. If the Scheduling Coordinator registers seven (7) or more MSG Configurations, then the Scheduling Coordinator may only include two (2) eligible transitions between MSG Configurations for upward and downward transitions, respectively, starting from the initial MSG Configuration in the Transition Matrix. For each MSG Configuration, the responsible Scheduling Coordinator shall submit an Operational Ramp Rate and, as applicable, an Operating Reserve Ramp Rate and Regulating Reserves ramp rate, each of which shall have at least one (1) segment and no more than two (2) segments. The Scheduling Coordinator must establish the default MSG Configuration and its associated Default Resource Adequacy Path that apply to Multi-Stage Generating Resources that are subject to Resource Adequacy must offer obligations. The Scheduling Coordinator may submit changes to this information consistent with Sections 27.8.1 and 27.8.3, as they may apply.

\* \* \* \* \*

#### Section 29

\* \* \* \* \*

# 29.4 Roles and Responsibilities

\* \* \* \* \*

(d) **EIM Participating Resources.** 

- (1) Eligibility. The owner or operator of an EIM Resource is eligible to become an EIM Participating Resource if the EIM Resource –
  - (A) meets the eligibility requirements established by the EIM Entity in whose Balancing Authority Area the resource is located or scheduled or to which it may be dynamically transferred; and
  - (B) is capable of delivering Energy, Curtailable Demand, Demand Response Services, or similar services within the time specified by Section 29 for the Real-Time Market in which its EIM Participating Resource Scheduling Coordinator will submit Bids.
- (2) **EIM Participating Resource Agreement.** An EIM Participating Resource must execute an EIM Participating Resource Agreement.
- (3) **Obligations.** An EIM Participating Resource shall
  - (A) perform the obligations of an EIM Participating Resource under the EIM
     Participating Resource Agreement and Section 29;
  - (B) perform the obligations applicable to Market Participants and resources under the provisions of the CAISO Tariff described in Section 29.1(b);
  - (C) if it represents a Generating Unit, Load of a Participating Load, Proxy

    Demand Resource, or other qualified resource, perform the obligations required for the resource under the provisions of the CAISO Tariff described in section 29.1(b); and-
  - (D) comply with all CAISO Tariff requirements associated with resource

    registration and the measurement and verification of the associated

    services to be provided for EIM Resources other than Generating Units

    or CAISO qualified resources delivering Energy.

29.34 EIM Operations

\* \* \* \* \*

(e) **EIM Resource Plan.** 

\* \* \* \* \*

(4) Contents of EIM Base Schedules. EIM Base Schedules and EIM Sub-Entities of EIM Entities and EIM Sub-Entities must include hourly-level Demand Forecasts for EIM Demand, hourly-level schedules for resources, including any hourly-level schedules below PMin that the EIM Entity seeks an accounting for, and, for EIM Entities only, hourly-level scheduled Interchanges.

\* \* \* \* \*

(I) EIM Resource Sufficiency Evaluation – Capacity Test.

\* \* \* \* \*

(2) Supply and Demand Forecast. Conditions and actions in the Real-Time Market will affect what Supply will be counted and what Demand Forecast will be referenced in the capacity test performed in accordance with this Section 29.34(I) and, in some cases as noted below, both this capacity test and the flexibility test performed in accordance with Section 29.34(m).

- (B) For purposes of this Section 29.34(I) and also for purposes of Section 29.34(m) with respect to Section 29.34(I)(2)(B)(iii), Supply counted in the capacity test will not include—
  - (i) a Short Start Unit with a Bid in the RTM which received a Start-Up Instruction before the hour under evaluation and has failed to initiate Start-Up;
  - (ii) a Short Start Unit that is on Outage during the hour under evaluation or has returned from an Outage but is unable to Start-Up within the hour under evaluation; or
  - (iii) an Import Bid or Export Bid for delivery to or export from the CAISO Balancing Authority Area <u>lackingwithout</u> a transmission profile in a submitted E-Tag <u>that</u>-support<u>ings</u> its Interchange Schedule <u>at the time the final bindingby T-40, in both the</u> capacity test and <u>the-flexibility</u> test for the CAISO Balancing Authority Area <u>are</u> performed in accordance with Section 29.34(m).

- (n) Effect of EIM Resource Capacity or Flexibility Insufficiency.
  - (1) **Insufficient Capacity.** If, after the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules as provided in Section 29.34(f)(1)(c), the

EIM Resource Plan or the CAISO equivalent has insufficient Supply as determined according to Section 29.34(I) -

- (A) the CAISO will not include the EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area in the Uncertainty Requirement for the group of Balancing Authority Areas that passes both the capacity test and flexibility tests in the upward and downward directions, as applicable of the EIM Area; and
- (B) the CAISO will hold the EIM Transfer limit into or from the EIM Entity
  Balancing Authority Area or the CAISO Balancing Authority Area, as
  specified in Section 29.34(n)(2), at the less restrictive of the value for the
  last 15-minute interval with sufficient Supply balance or the hourly RealTime EIM Base Schedule corresponding to the 15-minute interval with
  insufficient Supply as described in the business practice manual.
- determination of the Uncertainty Requirement in the manner provided by

  Section 44.2.4 within the existing RTUC processes and along the time intervals for RTUC runs set forth in Section 34.3.1 and further explained in the Business Practice Manual for Market Operations, and solely for the purpose of this subsection 29.34(n)(1), the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the first fifteen-minute interval of each hour will be that provided in Section 29.34(f)(1)(B) and the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the remaining intervals of each hour will be that provided in Section 29.34(f)(1)(C).

- (2) Insufficient Flexible Ramping Capacity. If, after the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules or the CAISO equivalent as provided in Section 29.34(f)(1)(c), the CAISO determines -
  - (A) that an EIM Entity Balancing Authority Area or the CAISO Balancing
    Authority Area has insufficient upward Ramping capacity according to
    Section 29.34(m), the CAISO will take the actions described in Section
    29.34(n)(1)(A) and (B) in the upward and into the EIM Entity BAA or
    CAISO BAA direction; and
  - (B) that an EIM Entity Balancing Authority Area or the CAISO Balancing
    Authority Area has insufficient downward Ramping capacity according to
    Section 29.34(m), the CAISO will take the actions described in Section
    29.34(n)(1)(A) and (B) in the downward and from the EIM Entity BAA or
    CAISO BAA direction.
  - determination of the Uncertainty Requirement in the manner provided by

    Section 44.2.4 within the existing RTUC processes and along the time
    intervals for RTUC runs set forth in Section 34.3.1 and further explained
    in the Business Practice Manual for Market Operations, and solely for the
    purpose of this subsection 29.34(n)(2), the final opportunity for the EIM
    Entity to revise hourly Real-Time EIM Base Schedules to allow for
    procurement of the Flexible Ramping Product for the first fifteen-minute
    interval of each hour will be that provided in Section 29.34(f)(1)(B) and
    the final opportunity for the EIM Entity to revise hourly Real-Time EIM
    Base Schedules to allow for procurement of the Flexible Ramping
    Product for the remaining intervals of each hour will be that provided in
    Section 29.34(f)(1)(C).
- (3) Assistance Energy Transfers.

- (A) In General. A Balancing Authority Area in the EIM Area may obtain assistance Energy transfers into its Balancing Authority Area prior to December 31, 2025 if its Scheduling Coordinator has submitted to the Master File a designation elected to accept automatically incremental EIM Transfer imports and pay the associated EIM Assistance Energy Transfer Surcharge following the failure of the upward capacity test in Section 29.34(I) or the upward flexibility test in Section 29.34(m) in accordance with the timelines and procedures included in the Business Practice Manual for the Energy Imbalance Market. Consistent with the requirements in the Business Practice Manual, the CAISO will issue send a mMarket notification Notice prior to the CAISO Balancing Authority Area accepting assistance Energy transfers as provided in this section, with such election to remain in effect unless the CAISO issues a Market Notice at least 5 Business Days prior to withdrawing or resuming its participation.
- (B) Assistance Energy Transfer Product. If a participating Balancing
  Authority Area in the EIM Area has opted-in to receive assistance Energy
  transfers consistent with the process requirements set forth in the
  Business Practice Manuals and the participating Balancing Authority
  Area fails the upward capacity test in Section 29.34(I) or the upward
  flexibility test in Section 29.34(m) then—
  - the Balancing Authority Area will not be subject to the capacity test or flexibility test failure consequences <u>for EIM Transfers</u> in Section 29.34(n);
  - the Balancing Authority Area will pay the EIM Assistance EnergyTransfer Surcharge according to Section 29.11(t).

(C) Sunset Period. This tariff Section 29.34(n), together with Section29.11(t), will terminate on December 31, 2025.

\* \* \* \* \*

# Section 30

\* \* \* \* \*

# 30.4.6 Use-Limited Resources

\* \* \* \* \*

# 30.4.6.2.2 Methodology for Opportunity Cost Calculator

\* \* \* \* \*

Additional detail regarding the calculation of Opportunity Costs is provided in Appendix N to the Business Practice Manual for Market Instruments. Any dispute regarding the calculation of Opportunity Costs will be subject to the CAISO ADR Procedures set forth in Section 13.

\* \* \* \* \*

# Section 33

\* \* \* \* \*

# 33.2.2 Implementation Date.

The CAISO and the prospective EDAM Entity shall work together to determine the EDAM Entity Implementation Date based on the complexity and compatibility of the Balancing Authority's transmission and technology systems with the CAISO systems and the planned timing of the

CAISO's implementation of software enhancements. The EDAM Entity Implementation Date must be not less than six months and not more than twenty four months after the date that the EDAM Entity Implementation Agreement between the CAISO and the Balancing Authority becomes effective in accordance with its terms. Once established, the EDAM Entity may request a change in the EDAM Entity Implementation Date to account for any circumstances that may affect the implementation timeline.

\* \* \* \* \*

# Section 34

\* \* \* \* \*

#### 34.1.6 Eligible Intermittent Resources Forecast

\* \* \* \* \*

#### 34.1.6.3 Hybrid Resources

The CAISO will use reasonable efforts to issue Real-Time Market Schedules that observe Hybrid Resources' Dynamic Limits, High Sustainable Limits, State of Charge, and production forecasts, as applicable. Hybrid Resources with a variable component may elect to receive a CAISO forecast to inform their bidding, or they may elect to use their own forecast. For Hybrid Resources that have elected to use their own forecast as specified in Section 4.8.2.1.1, the responsible Scheduling Coordinator must submit to the CAISO its forecast for the variable component for the binding interval by 37.5 minutes prior to flow (the start of the applicable FMM optimization for the binding interval). If such Scheduling Coordinator does not provide such forecast to the CAISO, the CAISO will use the direct telemetry MW output from the resource's variable component.

# 34.3.1 RTUC Optimization

The Real-Time Unit Commitment (RTUC) process uses SCUC and is run every fifteen (15) minutes to make commitment decisions for Short Start Units having Start-Up Times for the next four to seven subsequent fifteen-minute intervals, depending on when during the hour the run occurs. For Multi-Stage Generating Resources the RTUC will issue a binding Transition Instruction separately from the binding Start-Up or Shut Down instructions. The RTUC can also be run with the Contingency Flag activated, in which case the RTUC can commit Contingency Only Operating Reserves. If RTUC is run without the Contingency Flag activated, it cannot commit Contingency Only Operating Reserves. RTUC is run at the following time intervals: (1) at approximately 12 minutes prior to the first Trading Hour, to serve as the HASP run, for T-45 minutes to T+60 minutes; (2) at approximately 7.5 minutes into the current hour for T-30 minutes to T+60 minutes; (3) at approximately 22.5 minutes into the current hour for T-15 minutes to T+60 minutes; and (4) at approximately 37.5 minutes into the current hour for T to T+60 minutes, where T is the beginning of the next Trading Hour. The HASP is a special RTUC run that is performed at approximately 71.567.5 minutes before each Trading Hour and has the additional responsibility of predispatching Energy and awarding Ancillary Services for HASP Block Intertie Schedules. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the RTUC and the FMM taking into consideration the impacts of the derate or outage on the available MSG Configurations. Not all resources identified as needed in a given RTUC run will necessarily receive CAISO commitment instructions immediately, because during the Trading Day the CAISO may issue a commitment instruction to a resource only at the latest possible time that allows the resource to be ready to provide Energy when it is expected to be needed.

\* \* \* \* \*

#### 34.18.1 Dispatch of Self-Provided Ancillary Services

Where a Scheduling Coordinator has chosen to self-provide the whole of the additional Operating

Reserve required to cover any Interruptible Imports which it has submitted through Self-Schedules in the

Day-Ahead Market and has identified specific Generating Units, Participating Loads, System Units or

System Resources as the providers of the additional Operating Reserve concerned, the CAISO shall Dispatch only the designated Generating Units, Participating Loads, System Units or System Resources in the event of the CAISO being notified that the on demand obligation is being curtailed. The Scheduling Coordinator scheduling an Interruptible Import will be responsible for Operating Reserves associated with the Interruptible Import, regardless of whether the Scheduling Coordinator is an LSE or not. For all other Submissions to Self-Provide an Ancillary Service, the Energy Bid shall be used to determine the Dispatch, subject to the limitation on the Dispatch of Spinning Reserve and Non-Spinning Reserve set forth in Section 34.18.2.2.

\* \* \* \* \*

#### Section 36

\* \* \* \* \*

#### 36.8.2 Load Eligible For CRRs And Eligible CRR Sinks

Any entity that wishes to participate in the CRR Allocation process must provide information that demonstrates that it has an obligation to serve load. An LSE's eligibility for allocation of CRRs is measured by the quantity of Load that it serves that is exposed to Congestion Charges for the use of the CAISO Controlled Grid as determined in Sections 36.8.2.1 and 36.8.2.2. An OBAALSE's eligibility for allocation of CRRs is also measured by the quantity of load that it serves that is exposed to Congestion Charges for the use of the CAISO Controlled Grid as determined in Section 36.9.3. For LSEs, the information necessary may include, but is not limited to, Settlement Quality Meter Data or relevant documents filed with the California Energy Commission. For OBAALSEs, the necessary information may include, but is not limited to, historical tagged Real-Time Interchange Export Schedules and historical load data reflecting the load they serve that is exposed to Congestion Charges for the use of the CAISO Controlled Grid. In addition, each such OBAALSE shall support its data submission with a written sworn affidavit by an executive authorized to represent the OBAALSE attesting to the accuracy of the data, and the CAISO will have the right to audit the raw data and calculations used to develop the submitted data set. An LSE serving internal Load is eligible for CRRs up to its Seasonal CRR Eligible Quantity or

Monthly CRR Eligible Quantity, which is derived from its Seasonal CRR Load Metric or Monthly CRR Load Metric as described in Sections 36.8.2.1 and 36.8.2.2, respectively. Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities for Qualified OBAALSEs are determined as provided in Section 36.9.3. These quantities are calculated for each LSE or Qualified OBAALSE separately for each combination of season and time of use period for the annual CRR Allocation process, and for each time of use period for each monthly CRR Allocation process, and for each CRR Sink at which the eligible LSE serves Load or the Qualified OBAALSE exports Energy from the CAISO Balancing Authority Area. MSS eligibility for CRRs will account for net or gross MSS Settlement in accordance with Section 4.9.13.1. If the MSS Operator elects net Settlement, LSEs for such MSS Load shall submit CRR Sink nominations at the MSS LAP. If the MSS elects for gross Settlement, LSEs for such MSS Load shall submit CRRs Sink nominations at the applicable Default LAP. Load that is Pumped-Storage Hydro Units but is not Participating Load may be scheduled and settled at a PNode or Custom Load Aggregation Point and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode or Custom Load Aggregation Point. Load that is a Participating Load that is also aggregated is scheduled and settled at a Custom Load Aggregation Point that is customized specifically for such Load and, therefore, LSEs for such Participating Load shall submit CRR Sink nominations at the Custom Load Aggregation Point. Load that is Participating Load is scheduled and settled at an individual PNode, and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode. Load that is non-Participating Load, and (i) is not Load associated with Pumped-Storage Hydro Units, (ii) and is not Load associated with ETCs, TORs, or (iii) is not Load associated with MSS Operators that elects net Settlement, will beis scheduled and settled at the Default LAP. Therefore, LSEs for such Load shall submit CRR Sink nominations at their assigned Default LAP or Default LAPs if the Load they serve is located in more than one Default LAP. In tier 2 and tier 3 of the annual process and tier 1 and tier 2 of the monthly process, such LSEs may also submit CRR Sink nominations at a Sub-LAP of their assigned Default LAP. The CAISO will make available a list of allowable CRR Sources and Sinks to be used in the allocation at approximately the same time as the CAISO releases each CRR FNM. The allowable CRR Sinks will be consistent with the applicable CRR FNM. In the event that unforeseen changes to network conditions arise after the initialthirty day release of the list of allowable CRR Sinks and warrant revisions

to that list, the CAISO will provide updates to the list prior to the closing of nominations for the CRR Allocation.

#### 36.8.2.1 Seasonal CRR Eligible Quantity

Where feasible, tThe CAISO constructs Load duration curves by season and time of use periods for the annual CRR Allocation process for each LSE based on meter data already within the CAISO's possession. If the CAISO does not possess the needed meter data or it is otherwise not feasible for the CAISO to calculate the Load duration curves based on data within its possession, then the Load duration curves will be based on the LSE's submission to the CAISO of its historical hourly Load data for the prior year, for each LAP within which the LSE serves Load. For load that is subject to variable and difficult-topredict hydrological conditions, the LSE has the option to submit the load's five-year rolling average historical hourly load data and the CAISO will use the submitted five-year average data for constructing the load duration curves. Once the LSE has exercised this option, the LSE must continue to submit fiveyear rolling average historical hourly load data for the annual CRR Allocation process in subsequent years. An LSE's Seasonal CRR Load Metric for each season and time of use period is the MW level of Load that is exceeded only in 0.5% of the hours based on the LSE's historical Load data. In the event that the LSE has lost or gained net Load through Load Migration during the course of the prior year, the Seasonal CRR Load Metric will be adjusted to reflect the loss or gain in accordance with the applicable BPM. The CAISO calculates an LSE's Seasonal CRR Eligible Quantity by first adjusting that LSE's Seasonal CRR Load Metric based on load migration and subtracting the quantity of Load served by its TORs, ETCs, and Converted Rights to form the LSE's Adjusted Load Metric, and then multiplying the result by 0.75.

# 36.8.2.2 Monthly CRR Eligible Quantity

The Monthly CRR Load Metric for aAn LSE that serves Load that is eligible for CRRs but for which itswhose Load forecast is not verifiable in accordance with Section 36.8.6 is established based on shall, each month, submit to the CAISO five (5) years of prior hourly historical Load data for that Load for the same applicable month. The LSE must provide the historical Load data to the CAISO if the CAISO does not possess that data. Such LSE may submit fewer years of historical data for that Load if granted a waiver by the CAISO because five (5) years of such Load data does not exist. Each month the CAISO will use the LSE's submitted hourly historical Load data for the relevant month to calculate two (2) Load duration curves for each year of historical Load data (one on-peak and one off-peak Load duration curve for the applicable month) for each CRR Sink in which such Load is located. For each Load duration curve, the CAISO will calculate the MW level of Load that is exceeded only in 0.5% of the hours. The CAISO will calculate an LSE's Monthly CRR Eligible Quantity for each on-peak and off-peak period for such Load by averaging the 0.5% exceeded values for the five years of data (or fewer years, if the CAISO does not possess five years of data and the CAISO granted the LSE waiver to submit fewer than five years of data) all years of submitted historical data, and then subtracting the quantity of Load served by its TORs, ETCs, and Converted Rights.

\* \* \* \* \*

# 36.11.2 Procedure for Allocating Merchant Transmission CRRs

No less than forty-five (45) days prior to the in-service date of a Merchant Transmission Facility, the Project Sponsor of the facility will inform the CAISO of the In-Service Date of the facility and that the Project Sponsor will be requesting Merchant Transmission CRRs associated with the Merchant Transmission Facility. The CAISO will complete the Merchant CRR Allocation as soon as feasible after the In-Service Date of the facility. The effective date of any such allocated Merchant Transmission CRRs is prospective and the Merchant Transmission CRRs are not settled and will allocate Merchant Transmission CRRs whose payment stream will be retroactive back to the In-Service Date.

\* \* \* \* \*

# Appendix A

# - Available Transfer Capability (ATC)

The available capacity of a given transmission path, in MW, after subtraction from that path's Total Transfer Capability of capacity associated with Existing Contracts and Transmission Ownership Rights and any Transmission Reliability Margin, as established consistent with CAISO and WECC transmission capacity rating guidelines, as further described in Appendix L-1.

\* \* \* \* \*

# - Capacity Benefit Margin (CBM)

The factor defined in Appendix L-1.

\* \* \* \* \*

# - EIM Upward Availability Available Balancing Capacity

Any upward capacity from an EIM Participating Resources or a non-participating resource that an EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator has identified in the EIM Resource Plan as available to address power balance and transmission violations in the EIM Balancing Authority Area.

\* \* \* \* \*

# - Transmission Reliability Margin (TRM)

A factor described in Appendix L-1.

\* \* \* \* \*

# Appendix B.19

**EIM Participating Resource Agreement (EIMPRA)** 

#### **ARTICLE IV**

# **CAISO TARIFF**

- **4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EIM Participating Resource shall abide by, and shall perform all of the obligations under the CAISO Tariff placed on EIM Participating Resources in respect of all matters set forth therein.
- 4.1.1 Additional EIM Participating Resource Requirements. The EIM Participating Resource shall comply with all CAISO Tariff requirements associated with resource registration and the measurement and verification of the associated services to be provided for EIM Resources other than Generating Units or CAISO qualified resources delivering Energy.

\* \* \* \* \*

# Appendix F

Rate Schedules

Schedule 1

**Grid Management Charge** 

Part A - Calculation of Grid Management Charge (GMC)

\* \* \* \* \*

2. The rate for the System Operations Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by forecast annual gross absolute value of MWh of real-time energy flows on the ISO Controlled Grid, net of amounts excluded pursuant to Part E of this Schedule.

\* \* \* \*

Part E - [Not used]

# Schedule 3

# **Regional Access Charge and Wheeling Access Charge**

\* \* \* \* \*

- 8.2 Any refund associated with a Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement or Non-Subscriber Usage Rate that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced in the CAISO Market Invoice.
- Operational Control in accordance with Section 3.4 of the Transmission Control Agreement, then the CAISO will no longer collect the TRR for that transmission facility through the CAISO's Access Charge or provide a Non-Subscriber Usage Payment Amount for that transmission facility effective upon the date the transmission facility is no longer under the Operational Control of the CAISO. The withdrawing Participating TO shall be obligated to provide the CAISO with all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR or Non-Subscriber Usage Rate.

  The CAISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from CAISO Operational Control, except the withdrawal of Subscriber Participating TO transmission facilities.

\* \* \* \* \*

Participating TO will make the appropriate filings at FERC to establish its Transmission Revenue Requirement for its Local Access Charge, and to obtain approval of any changes thereto. All such filings with the FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Local Access Charge. The Non-Load-Serving

Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

Federal power marketing agencies whose transmission facilities are under CAISO Operational Control shall develop their Local Transmission Revenue Requirements pursuant to applicable federal laws and regulations, including filing with FERC. All such filings with FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Access Charges. The procedures for public participation in a federal power marketing agency's ratemaking process shall be posted on the federal power marketing agency's website. The federal power marketing agency shall also post on the website the Federal Register Notices and FERC orders for rate making processes that impact the federal power marketing agency's Local Transmission Revenue Requirement. The Non-Load-Serving Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

\* \* \* \* \*

# Appendix K

**Ancillary Service Requirements Protocol (ASRP)** 

#### PART A

# **CERTIFICATION FOR REGULATION**

The requirements set forth in this Attachment K may be satisfied by the Ancillary Service Requirements

Provider, an applicant to become an Ancillary Service Requirements Provider, or the applicable

Scheduling Coordinator by following the process and procedures set forth in the Business Practice

Manual.

A 1 An Ancillary Service Provider wishing to provide Regulation as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision arrangement must meet the following operating characteristics and technical requirements in order to be and remain, certified by the CAISO to provide Regulation service unless granted a temporary exemption by the CAISO in accordance with criteria which the CAISO shall publish on the CAISO Website;

An Ancillary Service Provider wishing to be considered for certification for Regulation service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Regulation service. The Ancillary Service Provider shall at the same time send a copy of its request to that Scheduling Coordinator. Technical review request forms will be available from the CAISO.

A 3 No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of required interface equipment for Regulation, including a standard CAISO direct communication and direct control system. The CAISO shall send a copy of the listing to the resource's Scheduling Coordinator.

A 4 The Ancillary Service Provider may propose alternatives that it believes may provide an equivalent level of communication and control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.

A 5 The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six (6) weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process-by each sending to the Scheduling Coordinator a copy of any written communication which it sends to the other.

Dependent as to any alternative method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing providing a copy to the Ancillary Service Provider's Scheduling Coordinator at the same time. If agreed by the CAISO, the Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication and control.

A 7 Design, acquisition, and installation of the CAISO-approved communication and control equipment shall be under the control of the CAISO. The CAISO shall bear no cost responsibility or functional responsibility for such equipment, except that the CAISO shall arrange for and monitor the maintenance of the communication and control system at the Ancillary Service Provider's expense, unless otherwise agreed by the CAISO and the Ancillary Service Provider. The CAISO shall be responsible for the design, acquisition and installation of any necessary modifications to the CAISO EMS at its own cost.

A 8 The CAISO, in cooperation with the Ancillary Service Provider shall perform testing of the communication and control equipment to ensure that the communication and control system performs to meet the CAISO requirements.

A 9 When the CAISO is satisfied that the communication and control systems meet the CAISO's requirements, the Ancillary Service Provider shall request in writing that the CAISO conduct a certification test with a suggested primary date and time and at least two (2) alternative dates and times. The CAISO shall, within two (2) Business Days of

receipt of the Ancillary Service Provider's request, accept a proposed time if possible or suggest at least three (3) alternatives to the Ancillary Service Provider. If the CAISO responds by suggesting alternatives, the Ancillary Service Provider shall, within two (2) Business Days of receipt of the CAISO's response, respond in turn by accepting a proposed alternative if possible or suggesting at least three (3) alternatives, and this procedure shall continue until agreement is reached on the date and time of the test. The Generator Ancillary Service Provider shall inform its Scheduling Coordinator of the agreed date and time of the test.

- A 10 Testing shall be performed by the CAISO, with the cooperation of the Ancillary Service Provider. Such tests shall include, but not be limited to, the following:
  - (a) confirmation of control communication path performance;
  - (b) confirmation of voice circuit for receipt of Dispatch Instructions;
  - (c) confirmation of the resource's control performance; and
  - (d) confirmation of the CAISO EMS control to include changing the resource operating level over the range of Regulation proposed at different set points, from minimum to maximum, and at different rates of change from the minimum to the maximum permitted by the design of the resource.
- A 10.1 Testing for Non-Generator Resources requesting the use of Regulation Energy Management shall include a market simulation as described in the CAISO's Operating Procedures.
- A 11 Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Regulation as an Ancillary Service Provider and shall provide a copy of the certificate to the Scheduling Coordinator at the same time. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Regulation.
- A 12 The Scheduling Coordinator may submit Bids for Regulation service from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the second Trading Day after the CAISO's database reflects the resource's certificate.
- A 13 The certification to provide Regulation shall remain in force, subject to suspension, until:
  - (a) withdrawn by the Scheduling Coordinator or the Ancillary Service
    Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day; or
  - (b) if the resource obtained CAISO certification on the basis of a prior communication and control technology, until revoked by the CAISO for failure to comply with the requirement set forth in A 13.1 that the resource install a CAISO-specified standard CAISO direct communication and direct control system (unless exempted by the CAISO).

- A 13.1 Unless exempted by the CAISO, if the resource obtained CAISO certification on the basis of a prior communication and control technology, the CAISO shall provide written notice to the Ancillary Service Provider of the Ancillary Service Provider's obligation to install a CAISO-specified standard direct communication and direct control system along with a required date for said work to be completed as mutually agreed upon by the CAISO and the Ancillary Service Provider. Failure to meet the completion date shall be grounds for the revocation of certification, provided that the CAISO must provide the Ancillary Service Provider with at least ninety (90) days advance notice of the proposed revocation.
- A 14 The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

# **PART B**

# **CERTIFICATION FOR SPINNING RESERVE**

An Ancillary Service Provider wishing to provide Spinning Reserve as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Spinning Reserve service:

- An Ancillary Service Provider wishing to be considered for certification for Spinning Reserve service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Spinning Reserve service. The Ancillary Service Provider shall at the same time send a copy of its request to that Scheduling Coordinator. Technical review request forms will be available from the CAISO.
- B 3 No later than one week after receipt of the request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Spinning Reserve. The CAISO shall send a copy of the listing to the Ancillary Service Provider's Scheduling Coordinator.
- The Ancillary Service Provider may elect to implement any of the approved options defined by the CAISO, and, if it wishes to proceed with its request for certification, shall give written notice to the CAISO of its selected communication option, with a copy to its Scheduling Coordinator.
- When it receives the Ancillary Service Provider notice, the CAISO shall notify the Ancillary Service Provider and the Scheduling Coordinator in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment, the Ancillary Service Provider may proceed as indicated below to secure the necessary facilities and capabilities required.
- B 6 The Ancillary Service Provider may also propose alternatives that it believes may provide an equivalent level of control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability.

The CAISO may request additional information, if required, to assist in its evaluation of the proposal.

The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process-by each sending to the Scheduling Coordinator a copy of any written communication which it sends to the other.

**B**8

Upon agreement as to the method of communication and control to be used by the resource, the CAISO shall provisionally approve the Ancillary Service Provider's proposal in writing providing a copy to the resource's Scheduling Coordinator at the same time. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication.

\* \* \* \* \*

- B 13 Upon successful completion of the test the CAISO shall certify the resource as being permitted to provide Spinning Reserve as an Ancillary Service Provider and shall provide a copy of the certificate to the Scheduling Coordinator at the same time. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Spinning Reserve.
- B 14 The Scheduling Coordinator may bid Spinning Reserve from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the Second Trading Day after the CAISO's database reflects the resource's certificate.
- The certification to provide Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day.
- **B 16** The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

#### **PART C**

#### **CERTIFICATION FOR NON-SPINNING RESERVE**

An Ancillary Service Provider wishing to provide Non-Spinning Reserve as an Ancillary Service from a resource whether pursuant to the CAISO's auction or as part of a self-provision arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Non-Spinning Reserve service:

\* \* \* \* \*

C 3 An Ancillary Service Provider wishing to be considered for certification for Non-Spinning Reserve service must make a written request to the CAISO, giving details of the technical

capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Non-Spinning Reserve. The Ancillary Service Provider shall at the same time send a copy of the request to that Scheduling Coordinator. Technical review request forms will be available from the CAISO.

- C 4 No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Non-Spinning Reserve. The CAISO shall send a copy of the listing to the Ancillary Service Provider's Scheduling Coordinator.
- C 5 The Ancillary Service Provider may elect to implement any of the acceptable communication options and interface equipment options. The Ancillary Service Provider shall give written notice to the CAISO of its selected communication option and interface equipment option, with a copy to its Scheduling Coordinator.
- When it receives the Ancillary Service Provider's notice, the CAISO shall notify the Ancillary Service Provider and the Scheduling Coordinator in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment the Ancillary Service Provider may proceed as indicated below to secure the necessary facilities and capabilities required.
- C 7 The Ancillary Service Provider may also propose alternatives that it believes may provide an equivalent level of control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.
- The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process-by each sending to the Scheduling Coordinator a copy of any written communication which it sends to the other.
- Upon agreement as to the method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing providing a copy to the Ancillary Service Provider's Scheduling Coordinator at the same time. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication.

- Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Non-Spinning Reserve as an Ancillary Service and shall provide a copy of the certificate to the Scheduling Coordinator at the same time. The Scheduling Coordinator shall request the CAISO to update its database to reflect the permission for the resource to provide Non-Spinning Reserve.
- C 15 The Scheduling Coordinator may bid Non-Spinning Reserve service from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending

0100 on the second Trading Day after the CAISO database reflects the resource's certificate.

- The certification to provide Non-Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day.
- C 17 The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

\* \* \* \* \*

#### Appendix L-1

The provisions of this Appendix L-1 apply to the calculation of ATC to establish Wheeling Through Priorities that will be effective beginning June 1, 2024 and thereafter.

#### Appendix L-1 Method to Assess Available Transfer Capability

\* \* \* \* \*

- L.1.3.1 Transmission Capacity for ETC and TOR The CAISO uses the ETC Reservations Calculator (see Section L.1.3.1.1) to reserve transmission capacity for each ETC and TOR based on TRTC Instructions the responsible Participating Transmission Owner or Non-Participating Transmission Owner submits to the CAISO as to the amount of firm transmission capacity that should be reserved on each Transmission Interface for each hour of the Trading Day in accordance with Sections 16 and 17 of the CAISO Tariff. The types of TRTC Instructions the CAISO receives generally fall into three basic categories:
  - The ETC or TOR reservation is a fixed percentage of the TTC on a line, which decreases as the TTC is derated (ex. TTC = 300 MW, ETC fixed percentage = 2%, ETC = 6 MWs, TTC derated to 200 MWs, ETC = 4 MWs);
  - The ETC or TOR reservation is a fixed amount of capacity, which decreases if the line's TTC is derated below the reservation level (ex. ETC = 80 MWs, TTC declines to 60 MW, ETC = TTC or 60 MWs; or
  - The ETC or TOR reservation is determined by an algorithm that changes at various levels of TTC for the line (ex. Intertie TTC = 3,000 MWs, when line is operating greater than 2,000 MWs to full capacity ETC = 400 MWs, when capacity is below 2000 MWs ETC = TTC/2000\* ETC).

Existing Contract capacity reservations remain reserved during the Day-Ahead Market and

<u>HASP</u>through the FMM. To the extent that the reservations are unused after the <u>HASP</u>FMM has been run for a given fifteen-minute interval, then the capacity reservations are released for the remaining Real-Time Market processes conducted for the given Trading Hourthree RTD intervals within that fifteen-minute interval.

\* \* \* \* \*

# Appendix P

\* \* \* \* \*

#### **5 Duties of Market Monitor**

#### 5.1 Review of Market Rules

DMM shall review existing and proposed market rules, tariff provisions, and market design elements and recommend proposed rule and tariff changes to the CAISO, the CAISO Governing Board, FERC staff, the California Public Utilities Commission, {M}arket {P}articipants, and other interested entities.

\* \* \* \* \*

# Appendix U

AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO LARGE GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS

\* \* \* \* \*

Appendix 7 Agreement for Allocating LGIP and Study Responsibilities

\* \* \* \* \*

# ATTACHMENT A INTERCONNECTION STUDY RESPONSIBILITY ALLOCATION

# Interconnection Feasibility Study Timeline

(1) Load Flow	Typical Calendar Days	<u>Typical</u> <u>Cumulative</u> <u>Days</u>	
CAISO directs PTO(s) to Develop draft Base Cases (Milestone)	<u>0</u>	<u>0</u>	
PTO(s) develop draft Base Cases and deliver to CAISO	<u>7</u>	<u>7</u>	
CAISO reviews Base Cases and provides direction to PTO(s) At the direction of the CAISO, PTO(s) develops contingency lists and provide to CAISO.	7	14	
PTO incorporates CAISO directions into Base Cases; CAISO approves Base Cases; CAISO reviews and approves contingency lists. If there is disagreement on the contingency list, the CAISO and PTO(s) must coordinate to revise the contingency list. CAISO approves the contingency list.	<u>7</u>	<u>21</u>	
CAISO performs Load Flow & prepares summary results of impacted systems (other PTO(s) or Affected Systems) and submits results to impacted systems. Such results may include CAISO proposed solutions for mitigation to any violations uncovered in the Load Flow study.	<u>7</u>	<u>28</u>	
Impacted PTO(s) review CAISO results and recommend mitigation solutions as appropriate.	<u>5</u>	<u>33</u>	
Short Circuit Duty (concurrent with Load Flow Activity)			
At the CAISO's direction, PTO(s) develop Base Case, and run short circuit analyses.	<u>10</u>	<u>10</u>	
PTO(s) to perform facilities review	<u>18</u>	<u>28</u>	
PTO(s) prepare draft study results and submit to the CAISO for review, recommendations and direction.	<u>5</u>	<u>33</u>	
(2) Facility cost estimates			
At the CAISO's direction, PTO(s) to prepare non-binding cost estimates and schedule for the direct assignment facilities and network upgrades identified in the power flow and short circuit duty analyses.	7	<u>40</u>	
Finalizing Report			
At the CAISO's direction, PTO(s) to prepare draft report for impacts in their service territory.	<u>5</u>	<u>45</u>	
CAISO compiles all results into a draft report that covers grid impacts.	<u>5</u>	<u>50</u>	
PTO(s) reviews CAISO integrated report and provides comments to CAISO.	<u>4</u>	<u>54</u>	
CAISO incorporates PTO(s) comments. If PTO(s') comments conflict with CAISO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in final report.	<u>6</u>	<u>60</u>	
CAISO provides final CAISO approved report to IC, impacted PTOs, and any applicable Affected Systems. (Milestone)	<u>0</u>	<u>0</u>	
(3) Load Power Flow	Typical Calendar Days	Typical Cumulative Days	
CAISO directs PTO(s) to Develop draft Base Cases (Milestone)	<u>0</u>	<u>0</u>	

PTO(s) develop draft Base Cases and deliver to CAISO	<u>7</u>	<u>7</u>
CAISO reviews Base Cases and provides direction to PTO(s) At the direction of the CAISO, PTO(s) develops contingency lists and provide to CAISO.	7	14
PTO incorporates CAISO directions into Base Cases; CAISO approves Base Cases; CAISO reviews and approves contingency lists. If there is disagreement on the contingency list, the CAISO and PTO(s) must coordinate to revise the contingency list. CAISO approves the contingency list.	<u>7</u>	<u>21</u>
CAISO performs Load Flow & prepares summary results of impacted systems (other PTO(s) or Affected Systems) and submits results to impacted systems. Such results may include CAISO proposed solutions for mitigation to any violations uncovered in the Load Flow study.	<u>7</u>	<u>28</u>
Impacted PTO(s) review CAISO results and recommend mitigation solutions as appropriate.	<u>5</u>	<u>33</u>
Short Circuit Duty (concurrent with Load Flow Activity)		
At the CAISO's direction, PTO(s) develop Base Case, and run short circuit analyses.	<u>10</u>	<u>10</u>
PTO(s) to perform facilities review	<u>18</u>	<u>28</u>
PTO(s) prepare draft study results and submit to the CAISO for review, recommendations and direction.	<u>5</u>	<u>33</u>
(4) Facility cost estimates		
At the CAISO's direction, PTO(s) to prepare non-binding cost estimates and schedule for the direct assignment facilities and network upgrades identified in the power flow and short circuit duty analyses.	7	40
Finalizing Report		
At the CAISO's direction, PTO(s) to prepare draft report for impacts in their service territory.	<u>5</u>	<u>45</u>
CAISO compiles all results into a draft report that covers grid impacts.	<u>5</u>	<u>50</u>
PTO(s) reviews CAISO integrated report and provides comments to CAISO.	<u>4</u>	<u>54</u>
CAISO incorporates PTO(s) comments. If PTO(s') comments conflict with CAISO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in final report.	<u>6</u>	<u>60</u>
CAISO provides final CAISO approved report to IC, impacted PTOs, and any applicable Affected Systems. (Milestone)	<u>0</u>	<u>0</u>

Load Flow**Typical Calendar DaysTypical Cumulative Days**CAISO directs PTO(s) to Develop draft Base Cases (Milestone)00PTO(s) develop draft Base Cases and deliver to CAISO77CAISO reviews Base Cases and provides direction to PTO(s)

At the direction of the CAISO, PTO(s) develops contingency lists and provide to CAISO.714PTO incorporates CAISO directions into Base Cases; CAISO approves Base Cases; CAISO reviews and approves contingency lists. If there is disagreement on the contingency list, the CAISO and PTO(s) must coordinate to revise the contingency list. CAISO approves the contingency list.721CAISO performs Load Flow & prepares summary results of impacted systems (other PTO(s) or Affected Systems) and submits results to impacted systems. Such results may include CAISO proposed solutions for mitigation to any violations uncovered in the Load Flow study. 728Impacted PTO(s) review CAISO results and recommend mitigation solutions as appropriate. 533Short Circuit Duty (concurrent with Load Flow Activity)At the CAISO's direction, PTO(s) develop Base Case, and run short circuit analyses. 1010PTO(s) to perform facilities review 1828PTO(s) prepare draft study results and submit to the CAISO for review, recommendations and direction. 533Facility cost estimatesAt the CAISO's direction, PTO(s) to prepare non-binding cost estimates and schedule for the direct assignment facilities and network upgrades identified in the power flow and short circuit duty analyses.740Finalizing Report At the CAISO's direction, PTO(s) to prepare draft report for impacts in their service territory,545CAISO compiles all results into a draft report that covers grid impacts. 550PTO(s) reviews CAISO integrated report and provides comments to CAISO. 454CAISO incorporates PTO(s) comments. If PTO(s') comments conflict with CAISO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in final report.660CAISO provides final CAISO approved report to IC, impacted PTOs, and any applicable Affected Systems. (Milestone)00

\* \* \* \* \*

# **Interconnection System Impact Study Timeline**

Standard System Impact Study Load Flow/Post Transient/Stability Process	<u>Typical</u> <u>Calendar</u>	Typical Cumulative	
	<u>Days</u>	<u>Days</u>	
At the CAISO's direction, PTO(s) develop draft Base Case(s)	0	0	
PTO(s) develop(s) draft Base Case(s) and deliver(s) to CAISO	<u>14</u>	<u>14</u>	
CAISO reviews Base Case(s) and provides direction to PTO	<u>7</u>	<u>21</u>	
At the CAISO's direction, PTO develops contingency lists	_		
PTO incorporates CAISO's directions into Base Cases CAISO approves Base Case(s)	<u>7</u>	<u>28</u>	
CAISO reviews and approves contingency lists	<u></u>	<u>20</u>	
At the CAISO's direction, the PTO may perform the ISIS Load			
Flow, Post Transient and Stability analyses & prepare			
mitigation solutions, as appropriate and submits draft study	<u>21</u>	<u>49</u>	
results to CAISO for review and direction*.			
*Pursuant to the terms of item 1 above: where the CAISO perform Transient and Stability analyses to determine grid impacts and expotentially impacted PTOs may, as part of the review process, pereview or validate Load Flow, Post Transient and Stability Analyst and recommend alternative solutions. (In the case of this election substituted for "PTO" for remainder of ISIS process.)	valuate mitigaterform activitie is to assess C	ion solutions, the s to adequately AISO results	
PTO develops or supplements CAISO proposed mitigation plans and/or develops alternative mitigation plans for consideration, as appropriate, and submits to CAISO for review and direction	<u>14</u>	<u>63</u>	
Short Circuit Duty (concurrent with the LF/PT/S)			
CAISO to coordinate with other potentially affected facility owners2	<u>n/a</u>	<u>n/a</u>	
CAISO directs PTO to develop Base Case and run short circuit	24	24	
analysis	<u>21</u>	<u>21</u>	
PTO to perform facilities review	<u>35</u>	<u>56</u>	
PTO to prepare draft study results and submits to the CAISO	<u>7</u>	<u>63</u>	
for review and direction	<u>-</u>	<u>50</u>	
Facility cost estimates and schedules	ı		
At the CAISO direction, PTO(s) to prepare cost estimates and			
schedules for the direct assignment facilities and network	<u>20</u>	<u>83</u>	
upgrades identified in the ISIS power flow, short circuit duty,			
post transient, and stability studies.			
Final Report	T		
At the CAISO's direction, PTO(s) prepares draft report for	<u>7</u>	<u>90</u>	
impacts in their service territory.  [Footnote 2: In accordance with the WECC Short Circuit Duty Pro	_		
	2000ui Gj		
CAISO compiles all results into a draft report that covers grid impacts, as appropriate. CAISO reviews integrated draft report and submits comments, recommendations and direction to the PTO	<u>9</u>	<u>99</u>	

Standard System Impact Study Load Flow/Post Transient/Stability Process	Typical Calendar Days	Typical Cumulative Days
PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.  PTO submits final draft report less the deliverability results to the CAISO. The CAISO will finalize the report and tender the CAISO approved report to the IC after incorporating Deliverability Assessment results.	<u>14</u>	<u>113</u>
CAISO Deliverability Assessment (concurrent with other studies)		
Assessment process pursuant to LGIP Section 3.3.3, the CAISO		
pursuant to LGIP Section 3.3.2 to determine potential operating I	<u>imitations on t</u>	he generator
due to constraints under a variety of system conditions.  PTO provides GE PSLF compatible change files for all project changes since last Deliverability Assessment, including subject LGIP project.	<u>14</u>	14
CAISO incorporates project changes into Deliverability Assessment Base Case.	<u>7</u>	<u>21</u>
CAISO provides Deliverability Assessment & prepares results summary.	<u>14</u>	<u>35</u>
CAISO provides initial Deliverability Assessment results with no upgrades and upgrades necessary for full deliverability	<u>14</u>	<u>49</u>
CAISO reviews Load Flow, post transient, and stability analysis mitigation options. (The timing of this action should be in sync with completion of Load Flow study results)	<u>11</u>	<u>60</u>
CAISO has the opportunity to revise Delivery Network Upgrades necessary for full deliverability, based on optimization with LF results.	7	<u>67</u>
At the CAISO's direction, PTO to provide deliverability related upgrade costs and schedules, as appropriate. (This action should occur when PTO is performing cost analysis for Load Flow and Short Circuit Duty upgrades)	<u>16</u>	<u>83</u>
CAISO drafts Deliverability Assessment results.	<u>7</u>	<u>90</u>
PTO reviews/comments on Deliverability Assessment results.	<u>12</u>	<u>102</u>
CAISO incorporates PTO comments on the Deliverability Assessment results, as appropriate. Any remaining conflicts must be noted in final report.	<u>11</u>	<u>113</u>
Final Study Report		
CAISO provides final approved report to IC, PTO, and any applicable affected systems.	7	<u>120</u>

Standard System Impact Study Load Flow/Post Transient/Stability ProcessTypical Calendar DaysTypical Cumulative DaysAt the CAISO's direction, PTO(s) develop draft Base Case(s)00PTO(s) develop(s) draft Base Case(s) and deliver(s) to CAISO 1414CAISO reviews Base Case(s) and provides direction to PTO721At the CAISO's direction, PTO develops contingency listsPTO incorporates CAISO's directions into Base Cases

CAISO approves Base Case(s)

CAISO reviews and approves contingency lists—728At the CAISO's direction, the PTO may perform the ISIS Load Flow, Post Transient and Stability analyses & prepare mitigation solutions, as appropriate and submits draft study results to CAISO for review and direction\*.—2149

\*Pursuant to the terms of item 1 above: where the CAISO performs the ISIS Load Flow, Post Transient and Stability analyses to determine grid impacts and evaluate mitigation solutions, the potentially impacted PTOs may, as part of the review process, perform activities to adequately review or validate Load Flow, Post Transient and Stability Analysis to assess CAISO results and recommend alternative solutions. (In the case of this election, "PTOs" should be substituted for "PTO" for remainder of ISIS process.)PTO develops or supplements CAISO proposed mitigation plans and/or develops alternative mitigation plans for consideration, as appropriate, and submits to CAISO for review and direction1463Short Circuit Duty (concurrent with the LF/PT/S)CAISO to coordinate with other potentially affected facility owners²n/an/aCAISO directs PTO to develop Base Case and run short circuit analysis 2121PTO to perform facilities review3556PTO to prepare draft study results and submits to the CAISO for review and direction763Facility cost estimates and schedulesAt the CAISO direction, PTO(s) to prepare cost estimates and schedules for the direct assignment facilities and network upgrades identified in the ISIS power flow, short circuit duty, post transient, and stability studies. 2083Final ReportAt the CAISO's direction, PTO(s) prepares draft report for impacts in their service territory.790 [Feotnote 2: In accordance with the WECC Short Circuit Duty Procedure]

CAISO compiles all results into a draft report that covers grid impacts, as appropriate. CAISO reviews integrated draft report and submits comments, recommendations and direction to the PTO999PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.14113PTO submits final draft report less the deliverability results to the CAISO. The CAISO will finalize the report and tender the CAISO approved report to the IC after incorporating Deliverability Assessment results. CAISO Deliverability Assessment (concurrent with other studies) As part of the Deliverability Assessment process pursuant to LGIP Section 3.3.3, the CAISO may also perform studies pursuant to LGIP Section 3.3.2 to determine potential operating limitations on the generator due to constraints under a variety of system conditions. PTO provides GE PSLF compatible change files for all project changes since last Deliverability Assessment, including subject LGIP project.1414CAISO incorporates project changes into Deliverability Assessment Base Case.721CAISO provides Deliverability Assessment & prepares results summary.1435CAISO provides initial Deliverability Assessment results with no upgrades and upgrades necessary for full deliverability1449CAISO reviews Load Flow, post transient, and stability analysis mitigation options. (The timing of this action should be in sync with completion of Load Flow study results)1160CAISO has the opportunity to revise Delivery Network Upgrades necessary for full deliverability, based on optimization with LF results.767At the CAISO's direction, PTO to provide deliverability related upgrade costs and schedules, as appropriate. (This action should occur when PTO is performing cost analysis for Load Flow and Short Circuit Duty upgrades) 1683CAISO drafts Deliverability Assessment results.790PTO reviews/comments on Deliverability Assessment results.12102CAISO incorporates PTO comments on the Deliverability Assessment results, as appropriate. Any remaining conflicts must be noted in final report.11113Final Study ReportCAISO provides final approved report to IC, PTO, and any applicable affected systems.7120

\* \* \* \* \*

#### Appendix X

#### **Approved Project Sponsor Agreement (APSA)**

\* \* \* \* \*

#### ARTICLE 10. COST RECOVERY, BILLING, AND PAYMENT

Transmission Revenue Requirement. The Approved Project Sponsor may apply to FERC for a Transmission Revenue Requirement for transmission facilities not yet in operation, but approved under the transmission planning provisions of the CAISO Tariff, that will be Regional Transmission Facilities or Local Transmission Facilities when placed under the CAISO's Operational Control. If FERC approves such Transmission Revenue Requirement, the CAISO shall incorporate the Transmission Revenue Requirement into the Regional Access Charge or Local Access Charge in accordance with the CAISO Tariff. The Approved Project Sponsor acknowledges and agrees with the cost estimates and the binding cost cap, or other binding cost containment measures, if applicable, set forth in Appendix E.

[Include the following clause if the Approved Project Sponsor agrees to a cost cap or other binding cost containment measures.]

10.1.1 The Approved Project Sponsor agrees that it shall not seek, for recovery through its Transmission Revenue Requirement, higher costs than the maximum costs specified in, or determined in accordance with, any cost cap or other binding cost containment measures as specified in Appendix E except for costs incurred to comply with any additional specifications of the CAISO or Interconnecting PTO beyond the functional requirements for the transmission facility included in Appendix A to this agreement that the CAISO issued for the competitive solicitation. The Approved Project Sponsor shall not seek recovery through its Transmission Revenue Requirement of any incentives or other costs that it has agreed to forego, as specified in Appendix E. The Approved Project Sponsor further agrees that the Transmission Control Agreement shall incorporate the Project cost cap or any other agreed-to binding cost containment measures agreed to or proposed by the Approved Project Sponsor. The provisions of this Section 10.1.1 shall survive termination of this Agreement.

\* \* \* \* \*

#### **Appendix Y**

For Interconnection Requests Generator Interconnection Procedures (GIP)

\* \* \* \* \*

# Attachment A Generating Facility Data To GIP

# Appendix 1 Interconnection Request GENERATING FACILITY DATA

\* \* \* \* \*

#### TABLE 1

# TRANSFORMER DATA (Provide for each level of transformation)

UNIT	
NUMBER OF TRANSFORMERS	PHASE

<u>RATING</u>	H Winding	X Winding	Y Winding
Rated MVA			
Connection (Delta, Wye, Gnd.)			
Cooling Type (OA,OA/FA, etc):			
Temperature Rise Rating			
Rated Voltage			
BIL			
Available Taps (% of rating)			
Load Tap Changer? (Y or N)			
Tap Settings			
<u>IMPEDANCE</u>	<u>H-X</u>	<u>H-Y</u>	<u>X-Y</u>
Percent			
MVA Base			
Tested Taps			
WINDING RESISTANCE	<u>H</u>	<u>X</u>	<u>Y</u>
<u>Ohms</u>			

**CURRENT TRANSFORMER RATIOS** 

<u>H</u>	<u>X</u>	<u>Y</u>	<u>N</u>
	Percent exciting current	at 100 % Voltage;	110% Voltage
	Supply copy of name	eplate and manufacture's	s test report when available
RATING Rated M	SH WindingX WindingY Windin	<del>g</del>	
Connec	tion (Delta, Wye, Gnd.)		
Cooling	Type (OA,OA/FA, etc):		
Tempera	ature Rise Rating		
Rated V	<del>′oltage</del>		
BIL			
Availabl	e Taps (% of rating)		
<del>Load Ta</del>	<del>p Changer? (Y or N)</del>		
Tap Sett	tings		
	<del></del>		
	<del></del>		
	<del></del>		
	<del></del>		
	<del></del>		

<del></del>
<del></del>
IMPEDANCEH-XH-YX-Y
Percent
MVA Base
MVA Base
MVA Base Tested Taps
MVA Base Tested Taps WINDING RESISTANCE
MVA Base Tested Taps WINDING RESISTANCE Ohms
MVA Base Tested Taps WINDING RESISTANCE
MVA Base Tested Taps WINDING RESISTANCE Ohms
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MVA Base Tested Taps WINDING RESISTANCE Ohms H
MVA Base Tested Taps WINDING RESISTANCE Ohms

¥		
CURRENT TRANSFO	ORMER RATIOS	
HX_ Percent exciting curre	YY	N 110% Voltage
Supply copy of name	plate and manufacture's to	est report when available

# Appendix 4

# AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS

\* \* \* \* \*

# Attachment A Interconnection Study Responsibility Allocation

\* \* \* \* \*

# **Phase I Interconnection Study Timeline**

Line	Phase I Cluster Study	Typical Calendar Days	Timeline (Days)
1	CAISO and PTOs develop initial Generating Facility groups for initial Dispatch assumptions and cost allocation purposes (except for thermal overload and short circuit mitigation).	1	1
2	PTOs develop draft Base Cases, each representing all Generating Facilities in the queue cluster, and deliver to CAISO.	<u>15</u>	<u>2-16</u>
<u>3</u>	PTO develops preferred and alternative, if applicable, direct interconnection plans, including the need for an Interconnection Grid Substation (IGS).	<u>15</u>	2-16
4	PTO develops draft contingency lists.	<u>15</u>	<u>2-16</u>

	CAISO reviews and approves Base Cases and direct		
	interconnection plans and merges them	1	
	together, as needed.		
_	PTOs update off-peak Base Cases.	_	47.04
<u>5</u>		<u>5</u>	<u>17-21</u>
	CAISO reviews and approves contingency lists. PTO		
	needs time to consider CAISO proposed		
	changes.		
	CAISO provides Deliverability Assessment results		
	identifying constrained facilities, using		
6		15	22.26
<u>6</u>	summer peak and off-peak Base Cases, and	<u>15</u>	<u>22-36</u>
	prepares results summary and may propose		
	mitigation plans for PTO review.		
	At the CAISO's direction, the PTO performs the off-		
	peak Load Flow, and summer peak and off-		
<u>7</u>	peak Post Transient and Stability analyses	15	22-36
<u>-</u>	and identifies mitigation solutions, as	10	22-00
	appropriate, and submits draft study results to		
	CAISO for review and direction.		
	PTO develops mitigation plans for summer peak and		
	off-peak or supplements CAISO proposed		
<u>8</u>	mitigation plans for consideration, as	<u>15</u>	<u>37-51</u>
_	appropriate, and submits to CAISO for review	_	
	and direction		
	CAISO retests Deliverability Assessment results with		
9	proposed Delivery Network Upgrades. PTO	<u>5</u>	52-56
3	reviews and comments on retest results.	<u> </u>	32-30
	CAISO develops shift factors for cost allocation		
10		E	E7 61
<u>10</u>	purposes of all Network Upgrades associated	<u>5</u>	<u>57-61</u>
	with mitigating thermal overloads.		
Short C	ircuit Duty		
0.110111			
<u>11</u>	CAISO coordinates with other potentially affected	n/a	n/a
11	facility owners <sup>1</sup> .	<u>11/a</u>	<u>11/a</u>
	CAISO directs PTO to develop Base Case and run	40	57.00
12	short circuit analysis.	<u>10</u>	<u>57-66</u>
	PTO performs facilities review. (Note: possibly for		
<u>13</u>	feedback into the power flow studies and PTO	<u>10</u>	<u>67-76</u>
	mitigation plans.)		<del></del>
	PTO prepares draft study results and submits to the		
<u>14</u>	CAISO for review and direction.	<u>3</u>	<u>77-79</u>
Facility	cost estimates and schedules	1	1
<u>i aciiity</u>	At the CAISO's direction, PTO(s) prepares cost		
15	estimates and schedules for the direct	70	22.00
<u>15</u>	assignment facilities and Network Upgrades	<u>78</u>	<u>22-99</u>
	identified in the power flow, short circuit duty,		
	post transient, and stability studies.	<u> </u>	
Final R		1	
<u>16</u>	At the CAISO's direction, PTO(s) prepares draft report	83	22-104
10	for impacts in its service territory.	30	<u></u>
	CAISO compiles all results into a draft report that		
	covers grid impacts, as appropriate. CAISO	1	
<u>17</u>	reviews integrated draft report and submits	<u>10</u>	<u>105-114</u>
I —	comments, recommendations and direction to	1 —	
	the PTO.		
L	<u> </u>	I.	

18	PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.  PTO submits final draft report to the CAISO. The	<u>10</u>	<u>115-124</u>
<u>19</u>	CAISO will finalize the report and tender the CAISO approved report to the ICs.		
Final St	udy Report		
<u>20</u>	CAISO provides final approved report to ICs, PTO, and any applicable Affected Systems.	<u>10</u>	<u>125-134</u>

LinePhase I Cluster StudyTypical Calendar DaysTimeline (Days)1CAISO and PTOs develop initial Generating Facility groups for initial Dispatch assumptions and cost allocation purposes (except for thermal overload and short circuit mitigation).112PTOs develop draft Base Cases, each representing all Generating Facilities in the queue cluster, and deliver to CAISO. 152-163PTO develops preferred and alternative, if applicable, direct interconnection plans, including the need for an Interconnection Grid Substation (IGS).152-164PTO develops draft contingency lists.152-165CAISO reviews and approves Base Cases and direct interconnection plans and merges them together, as needed.

#### PTOs update off-peak Base Cases.

CAISO reviews and approves contingency lists. PTO needs time to consider CAISO proposed changes.517-216CAISO provides Deliverability Assessment results identifying constrained facilities, using summer peak and off-peak Base Cases, and prepares results summary and may propose mitigation plans for PTO review.1522-367At the CAISO's direction, the PTO performs the off-peak Load Flow, and summer peak and off-peak Post Transient and Stability analyses and identifies mitigation solutions, as appropriate, and submits draft study results to CAISO for review and direction.1522-368PTO develops mitigation plans for summer peak and off-peak or supplements CAISO proposed mitigation plans for consideration, as appropriate, and submits to CAISO for review and direction.1537-519CAISO retests Deliverability Assessment results with proposed Delivery Network Upgrades. PTO reviews and comments on retest results.552-5610CAISO develops shift factors for cost allocation purposes of all Network Upgrades associated with mitigating thermal overloads.557-61Short Circuit Duty.11CAISO coordinates with other potentially affected facility owners.

12CAISO directs PTO to develop Base Case and run short circuit analysis.1057-6613PTO performs facilities review. (Note: possibly for feedback into the power flow studies and PTO mitigation plans.)1067-7614PTO prepares draft study results and submits to the CAISO for review and direction.377-79Facility cost estimates and schedules.15At the CAISO's direction, PTO(s) prepares cost estimates and schedules for the direct assignment facilities and Network Upgrades identified in the power flow, short circuit duty, post transient, and stability studies.7822-99Final Report.16At the CAISO's direction, PTO(s) prepares draft report for impacts in its service territory.8322-10417CAISO compiles all results into a draft report that covers grid impacts, as appropriate. CAISO reviews integrated draft report and submits comments, recommendations and direction to the PTO.10105-11418PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.10115-12419PTO submits final draft report to the CAISO. The CAISO will finalize the report and tender the CAISO approved report to the ICs.Final Study Report.20CAISO provides final approved report to ICs, PTO, and any applicable Affected Systems.10125-134

[footnote 1: In accordance with the WECC Short Circuit Duty Procedure]

\*\*All Interconnection Studies will be under the direction and oversight of, and approval by, the CAISO and may involve more than one PTO.

1-10 11-15 16-90
<u>11-15</u>
<u>11-15</u>
<u>16-90</u>
<u>16-90</u>
<u>16-90</u>
61-90
04 420
<u>91-120</u>
121-130
91-165
<u> </u>

	plan of service and including individual segments.		
<u>29</u>	CAISO reviews draft plan of service report and submits comments, recommendations and direction to the PTO.	<u>10</u>	<u>166-175</u>
<u>30</u>	PTO incorporates CAISO directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.	<u>21</u>	<u>176-196</u>
<u>31</u>	PTO submits final draft report to the CAISO. The CAISO will finalize the report.		

LineStandard Project Refinement and Facilities StudyTypical Calendar DaysTimeline (Days)21PTOs update Base Cases from Phase I Interconnection Study line 5 to remove projects that have withdrawn. 101-1022CAISO reviews and approves Base Cases.511-1523CAISO and PTOs update studies performed in Phase I lines 6-14 using Base Cases from line 22. Additional alternatives may be considered to address future generation development potential, meet load serving capability, and economic benefit objectives, and phased development and option value of transmission projects to address uncertainty.7516-90

23.1Large Network Upgrades will be further evaluated within the Phase 2 transmission study process as set forth in Section 24 of the CAISO Tariff. The large Network Upgrades either (a) consist of new transmission lines requiring new rights of way, are 200 kV or above, and have capital costs of \$50 million or greater, or (b) are 500 kV substation facilities that have capital costs of \$50 million or greater.24PTOs develop draft off-peak and summer peak operating year Base Cases as appropriate where each case includes all Generating Facilities in Phase II Interconnection Study having the same operating date and deliver to CAISO.3061-9025CAISO reviews and approves cases from line 24.26At the CAISO's direction, the PTOs perform operational studies using cases from line 25 to determine Network Upgrade requirements for each study year and identify any special operational requirements to connect projects in the year of study. 3091-12027At the CAISO's direction, the PTOs perform additional operational studies to identify the optimal approach for building out the overall plan of service on a segmented (i.e. building block) basis acknowledging that portions of the overall plan of service may be staged in segments over time 10121-130Final Plan of Service Report Including Facility Costs and Schedules 28At the CAISO's direction, PTO(s) prepares draft plan of service report. At the CAISO's direction, PTO(s) to prepare detailed cost estimates and schedules for the direct assignment facilities and Network Upgrades identified in the overall plan of service and including individual segments.7591-16529CAISO reviews draft plan of service report and submits comments, recommendations and direction to the PTO.10166-17530PTO incorporates CAISO directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.21176-19631PTO submits final draft report to the CAISO. The CAISO will finalize the report.

\* \* \* \* \*

#### Appendix 5

	Schedule for the Release and Review of Per Unit	Anticipated
<u>Line</u>	Costs	<u>Calendar Date(s)</u>
	Annual Deview Undete, and Dection of Dev Unit	
	Annual Review, Update, and Posting of Per Unit Costs	
		Ostahan mid langgan
	PTOs to review and update their per unit costs.	October – mid-January
	PTOs to provide their updated per unit costs to the	NO L. Lean and
	CAISO for CAISO review and posting to the CAISO	<u>Mid-January</u>
	Website.	
	CAISO to review and post the PTO per unit costs to	Third week of January
	the CAISO Website for stakeholder review.	Last week of lancour and
	Provide two weeks for stakeholders to review the	Last week of January and
	posted per unit costs.	first week of February
	CAISO to schedule and conduct a one-day	Cooped wook of Fohruger
	stakeholder meeting in February to discuss the posted per unit costs with stakeholders.	Second week of February
	Provide two weeks following the scheduled	
	stakeholder meeting for stakeholders to provide	Last two weeks of
	comments to the CAISO.	<u>February</u>
	Provide two weeks for CAISO and PTOs to review	
	and address stakeholder comments.	First two weeks of March
	Provide three weeks following the stakeholder	
	meeting for PTOs to review, update as needed, and	First three weeks of March
	finalize their per unit costs.	I list tillee weeks of March
	PTOs to provide their final per unit costs to the	
	CAISO for posting to the CAISO Website.	End of third week of March
	CAISO to review and post the PTOs' final per unit	
	costs to the CAISO Website.	Fourth week of March
	Final per unit costs are posted and available for use	
	to estimate the costs of Network Upgrades and	Last week of March to first
	Interconnection Facilities.	of April
	interconnection r delities.	

LineSchedule for the Release and Review of Per Unit Costs Anticipated
Calendar Date(s)Annual Review, Update, and Posting of Per Unit Costs PTOs to review and update
their per unit costs.October — mid-JanuaryPTOs to provide their updated per unit costs to the CAISO for
CAISO review and posting to the CAISO Website.Mid-JanuaryCAISO to review and post the PTO per unit
costs to the CAISO Website for stakeholder review.Third week of JanuaryProvide two weeks for
stakeholders to review the posted per unit costs.Last week of January and first week of FebruaryCAISO
to schedule and conduct a one-day stakeholder meeting in February to discuss the posted per unit costs
with stakeholders.Second week of February

Provide two weeks following the scheduled stakeholder meeting for stakeholders to provide comments to the CAISO.Last two weeks of FebruaryProvide two weeks for CAISO and PTOs to review and address stakeholder comments. First two weeks of MarchProvide three weeks following the stakeholder meeting for PTOs to review, update as needed, and finalize their per unit costs. First three weeks of MarchPTOs to provide their final per unit costs to the CAISO for posting to the CAISO Website. End of third week of MarchCAISO to review and post the PTOs' final per unit costs to the CAISO Website. Fourth week of MarchFinal per unit costs are posted and available for use to estimate the costs of Network Upgrades and Interconnection Facilities. Last week of March to first of April

\* \* \* \* \*

#### Appendix EE

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# ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

\* \* \* \* \*

#### 5.19 Modification.

5.19.1 General. The Interconnection Customer or the Participating TO may undertake modifications to its facilities, subject to Section 25.1(c) and Section 25 of the CAISO Tariff if the Interconnection Customer has achieved its Commercial Operation Date, and subject to Section 6.7.2 of Appendix DD if it has not.

If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

Netwithstanding Section 7.5 of Appendix DD, aAt any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 6.7.27.5.11 of Appendix DD will still apply to such requests to reduce capacity.

\* \* \* \* \*

#### **Article 15. Notices**

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, <u>conveyed by e-mail</u>, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

- **15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.
- **15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given as provided in Article 15.1 in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

\* \* \* \* \*

#### Appendix FF

#### **Article 1. Scope and Limitations of Agreement**

\* \* \* \* \*

- 1.5 Responsibilities of the Parties
  - 1.5.1 The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice. The Parties shall use the <a href="mailto:applicable">applicable</a> Large Generator Interconnection Agreement-(CAISO Tariff Appendix CC) to interpret the responsibilities of the Parties under this Agreement.

\* \* \* \* \*

#### **Article 13. Notices**

#### 13.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if

delivered in person, delivered by recognized national courier service, <u>conveyed by e-mail,</u> or sent by first class mail, postage prepaid, to the person specified below:

/ ((C) ((O) )			
Interconnect	ion Customer		
If to the Interconnect	ion Customer:		
mail to the telephone	numbers and	e-mail addresses set out below:	
	_	iven in writing may be so given by	telephone, facsimile o
		ermitted to be given by any Party	
Alternative Forms of			
City:		State:	Zip:
Address:			
Attention:			
Participating TO:			<del></del>
City:		State:	Zip:
Address:			
Attention:			
Interconnection Cust	tomer:		
Dillings and payment	is siiaii DE SEII	t to the addresses set out below:	
Billing and Payment	to aball be see	t to the addresses set out below.	
Dillian and Down			
i none. 310-	55 I- <del>4-</del> 100	<u>∟-man address</u> r <del>ax</del> .	<del></del>
Phone: 916-		E-mail addressFax:	
Folsom, CA			
250 Outcrop			
	uependent Sys	· · · · · · · · · · · · · · · · · · ·	
	denendent Sys	stem Operator Corporation	
If to the CAISO:			
Phone:		<u>⊏-man address</u> ⊨ <del>ax</del> :	
Olly:		State: <u>E-mail address</u> <del>Fax</del> :	∠ıp:
City:		State:	7in:
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Address:		01-1	
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Address:			

Attention:		
Address:		
City:	State:	Zip:
E-mail address:	·····	
If to the CAISO:		
	System Operator Corporation	
Attention:		
250 Outcropping Way Folsom, CA 95630		
Phone: 016-351-4100	Fax:	
E-mail address:	<del>- ax.</del>	
<b>Designated Operating Represer</b>	<u>ntative</u>	
The Parties may also designate	operating representatives to conduc	t the communications
may be necessary or convenien	t for the administration of this Agreen	nent. This person will
serve as the point of contact with	h respect to operations and maintena	ance of the Party's fac
Interconnection Customer's Ope	erating Representative:	
·		
Interconnection Custom	er:	
Interconnection Custom Attention:	er:	
Interconnection Custom Attention: Address:	er:	
Interconnection Custom Attention: Address:	er:	
Interconnection Custom Attention: Address:	er:	
Interconnection Custom Attention: Address:	State:State:	
Interconnection Custom Attention: Address: City: Phone: Participating TO's Operating Re	er:State:State: FaxE-mail address:  presentative:	Zip:
Interconnection Custom Attention: Address: City: Phone: Participating TO's Operating Re Participating TO:	er:State: FaxE-mail address: presentative:	Zip:
Interconnection Custom Attention: Address: City: Phone: Participating TO's Operating Re Participating TO: Attention:	State:  FaxE-mail address:  presentative:	Zip:
Interconnection Custom Attention: Address: City: Phone: Participating TO's Operating Re Participating TO: Attention: Address:	State:  FaxE-mail address:  presentative:	Zip:
Interconnection Custom Attention: Address: City: Phone: Participating TO's Operating Re Participating TO: Attention: Address: City:	State:State: presentative:State:	Zip: Zip:
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Interconnection Custom Attention: Address: City: Phone: Participating TO's Operating Re Participating TO: Attention: Address: City: Phone: CAISO's Operating Representate California Independent S	State:  FaxE-mail address:  presentative:  State:  State:  FaxE-mail address:	Zip:Zip:

### 13.5

13.4

<u>Changes to the Notice Information</u>
Any Party may change this information by giving five Business Days written notice to the other Parties prior to the effective date of the change.