

September 29, 2017

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: California Independent System Operator Corporation
Docket No. ER17-_____-000**

**Tariff Amendment to Implement Phase 1B and Phase 2 of the
Reliability Services Initiative**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) submits this tariff amendment to implement six discrete, stand-alone tariff changes that arise from the CAISO's reliability services initiative, Phase 1B and Phase 2.¹ Both initiatives focus on improving the CAISO's rules governing the resource adequacy (RA) program by reducing unnecessary complexity and making them more equitable and efficient for market participants.

Although the proposed tariff revisions arise from two phases of the CAISO's reliability services stakeholder initiative, each revision is discrete and stands on its own. From a substantive perspective, the six tariff revisions are merely separate elements of a multi-part filing that are severable from each other and not interrelated, interdependent, or affected by the Commission's actions on any other element. Thus, the Commission should evaluate the justness and reasonableness of each proposed tariff change based on its individual merits. Nonetheless, as discussed below, contrary determinations with respect to any one element could affect the implementation timeline.

¹ The CAISO submits this filing under Section 205 of the Federal Power Act, 16 USC § 824d, Part 35 of the Commission's Regulations, 18 C.F.R. § 35, *et seq.*, and rules 207 and 602 of the Commission's Rules of Practice and Procedure, 18 CFR §§ 385.207 and 385.602. The capitalized terms not otherwise defined have the meanings in the CAISO tariff, and references to specific sections, articles, and appendices are references to sections, articles, and appendices in the current CAISO tariff and revised or proposed in this filing, unless otherwise indicated.

The Phase 1B tariff revisions include: (1) streamlining the outage evaluation process for RA capacity; (2) adjusting the timeline for the monthly RA process; (3) capping a load serving entity's monthly local RA requirement at its system requirement; and (4) creating a deadline for local regulatory authorities that elect to allocate flexible capacity needs to inform the CAISO of that election.

The first two changes, relating to streamlining evaluation of RA outages and adjusting the monthly RA process, will improve the overall monthly RA process for load serving entities and suppliers by reducing compliance and procurement costs. The third Phase 1B change, relating to capping local RA requirements, addresses a narrow circumstance under the current RA rules in which a load serving entity may be required to show more local capacity in its RA plans for a given month than its entire projected peak load for that month because of methodological differences in how system and local requirements are calculated. The CAISO has identified no reliability need for requiring a load serving entity's local capacity to exceed its total system capacity for a given month. Accordingly, capping local capacity requirements at the total system requirement will avoid imposing unwarranted capacity procurement costs in the limited cases where this scenario may arise. The CAISO proposes the fourth Phase 1B change, creating a deadline to inform the CAISO of the election to allocate flexible capacity, out of an abundance of caution. The CAISO tariff already allows a local regulatory authority to choose either to allocate flexible capacity backstop procurement costs to its jurisdictional load serving entities or follow the tariff-defined default allocation; however, the tariff does not address how the CAISO should proceed if a local regulatory authority does not inform the CAISO of its election in a timely manner. The proposed tariff amendment addresses this minor gap by granting the CAISO authority to proceed with its default methodology if the local regulatory authority does not inform the CAISO by the deadline.

The Phase 2 tariff revisions include: (1) providing that capacity located in a local area but procured by a load serving entity as system capacity and not shown as Listed Local Capacity, has a system, rather than local, substitution obligation; and (2) modifying and streamlining the RA reporting obligations for small load serving entities.

The first Phase 2 change, allowing local capacity sometimes to provide system substitution, remedies an existing inequity of the RA rules that requires a resource physically located in a local capacity area² to provide substitute capacity from another resource in the same local area, even though the resource was procured as system RA capacity. The CAISO's proposal is more equitable

² More precisely, a resource's location is evaluated based on its electrical, rather than physical, location. Theoretically, a resource could be physically located in a local area but not electrically located in that area, or vice versa. For ease of usage, the CAISO will refer in this filing to the resource's physical location.

than the existing approach because it aligns substitution obligations with the category of the capacity being procured, *i.e.*, capacity procured as system RA, regardless of its location, will have a system-level substitution obligation. Only capacity shown as Listed Local will have a local area substitution requirement. This proposal addresses resource owners' equity concerns that some capacity located in local capacity areas is being procured as system capacity at a lower cost, but under the CAISO's tariff the resource owner is required to replace such capacity with local area capacity, which may carry a premium because it is a more constrained product than system capacity.

The second Phase 2 change, streamlining RA reporting for small load serving entities, responds to prior Commission encouragement that the CAISO consider mechanisms to address the disparate treatment of differently sized utilities in connection with RA showings. Consistent with the guidance provided by the Commission, the CAISO is modifying and streamlining the RA showing requirements in a manner that will reduce the opportunity for smaller load serving entities to incur penalties.

The CAISO respectfully requests that the Commission issue an order by December 15, 2017, accepting the tariff revisions in this filing effective on February 15, 2018. This will provide certainty to the CAISO and the affected parties, including the California Public Utilities Commission (CPUC), regarding the applicable rules for the 2019 resource adequacy program and for procurement in advance of the 2019 RA compliance year. The CAISO also requests a waiver of Section 35.3 of the Commission's regulations, 18 C.F.R. §35.3, to allow the proposed tariff provisions to go into effect more than 120 days after the tariff amendment filing date.

I. BACKGROUND

A. Overview of Resource Adequacy Program

Since 2006 the CAISO and local regulatory authorities within its balancing authority area, chiefly the CPUC, have jointly administered the RA program. This program requires that load serving entities procure capacity to meet their forecasted load plus a reserve margin, local area capacity needs, and flexible resource adequacy requirements. The RA program serves two stated objectives:

1. Provide sufficient RA capacity to the CAISO when and where needed to support the safe and reliable real-time operation of the CAISO grid.
2. Provide incentives for the siting and construction of new resources needed for future reliability.

Load serving entities under the CPUC's jurisdiction must procure at least 90 percent of their RA requirement for the five summer months in compliance

with a year-ahead forward commitment obligation. If their load is in any of the CAISO-defined local capacity regions, then they must procure 100 percent of their local capacity need for the entire year in the year-ahead timeframe. CPUC-jurisdictional load serving entities must procure 100 percent of the capacity needed to meet their RA requirement—their total forecast load for each month plus a planning reserve margin of 15 percent—in compliance with a month-ahead forward commitment obligation. CPUC-jurisdictional load serving entities must demonstrate that they have procured the required RA capacity by submitting an annual RA plan and monthly RA plans. Similarly, non-CPUC load serving entities must submit annual and monthly RA plans to the CAISO demonstrating procurement of the system RA requirements their respective local regulatory authorities establish and their allocated share of local capacity.

Each year the CAISO's role in the RA process begins with publishing the Locational Capacity Technical Study and the Deliverability Study. The Locational Capacity Technical Study determines the minimum capacity needed in each identified transmission constrained "load pocket" or local capacity area to ensure reliable grid operations. The Deliverability Study establishes the deliverability of generation in the CAISO balancing authority area and the total import capability for each import path allocated to each load serving entity. In the year-ahead timeframe the CAISO also conducts a study to determine its system-wide flexible capacity needs for each month of the next calendar year. The CAISO then allocates a proportionate share of the total flexible capacity needs to each local regulatory authority. Each local regulatory authority then determines how to allocate that overall need to each of its jurisdictional load serving entities. The CAISO uses the information in these studies and generator data to compile the annual Net Qualifying Capacity Report and Effective Flexible Capacity Report, which lists the net qualifying and effective flexible capacity, respectively, of all participating generators and other generating units that have requested to be eligible to participate in the RA program for the coming RA compliance year.

Load serving entities use the Net Qualifying Capacity Report and the Effective Flexible Capacity Report to identify resources from which they can procure RA capacity to satisfy their RA obligations. In the year-ahead and month-ahead timeframes, scheduling coordinators for load serving entities must provide RA plans to the CAISO demonstrating that they have met their RA requirements for that reporting period. Scheduling coordinators for the RA resources also submit year-ahead and monthly supply plans to the CAISO that verify their commitment to provide the listed RA capacity. The CAISO cross-validates the RA plans and supply plans to ensure that load serving entities are meeting their RA requirements. In the event of a discrepancy between plans, the CAISO advises the scheduling coordinators and the local regulatory authority to resolve the issue.

B. Prior Significant Resource Adequacy Tariff Filings

Since inception of the RA program, the CAISO has filed several major RA-related tariff filings with the Commission.

1. Standard Capacity Product

In 2009, the Commission approved the RA standard capacity product, which created a standard product definition for RA along with defined performance incentives.³ The performance incentives evaluated RA resource availability based on a unit's forced outages. Under the standard capacity product, a resource providing RA capacity whose forced outage rate fell below a defined threshold was subject to non-availability charges, and units whose availability exceeded the threshold were eligible for award payments. The charges and payments were self-funding. The CAISO made payments only to the extent it assessed availability charges.

The purpose of the standard capacity product was to streamline stakeholder contracting efforts and facilitate contract tradability. By creating a standard performance regime, parties did not need to account for this in their bilateral contracting. Rather than negotiate performance requirements on a transaction-by-transaction basis, parties could merely refer to the standard performance measures. A standard performance provision also facilitated capacity trading among parties. With a key contractual element standardized, parties could more readily trade excess capacity amongst themselves. As discussed *infra*, the CAISO subsequently replaced the standard capacity product with the Resource Adequacy Availability Incentive Mechanism (RAAIM).

2. Replacement Requirement

In 2006, the CPUC implemented the "replacement requirement" for its jurisdictional load serving entities. Under this rule, CPUC-jurisdictional load serving entities had to meet their RA requirements with RA capacity that would not be on an extended scheduled maintenance outage during a RA compliance month.⁴ The replacement rule required that if a load serving entity included on its RA plan a resource scheduled for more than a de minimus outage, then the load serving entity had to procure replacement RA capacity for the capacity on outage.

³ *Cal. Indep. Sys. Operator Corp.*, 127 FERC ¶ 61,298 (2009).

⁴ *Opinion on Remaining Phase 1 Issues*, Cal. Pub. Util. Comm'n D.06-07-031 (July 20, 2006).

In a 2011 decision, the CPUC terminated the replacement requirement effective for the 2013 RA compliance year.⁵ Absent the CPUC's replacement rule, CPUC-jurisdictional load serving entities would have been able to fully count RA capacity from a resource scheduled to be on outage for the entire month. To fill this gap, in 2012 the CAISO proposed its own replacement requirement,⁶ which the Commission accepted.⁷

Under the CAISO replacement requirement, the CAISO can approve resource maintenance outages from resources providing RA capacity through the outage management process if the resources provide replacement capacity. If resources do not provide replacement capacity, they can take their outages during off-peak hours or upon short notice if the outage will not detrimentally impact the efficient use and reliable operation of the grid.

3. Flexible Capacity Requirements

In 2014, the Commission accepted the CAISO's proposal to establish flexible resource adequacy capacity requirements for load serving entities and to enable the CAISO, under its capacity procurement mechanism, to procure backstop flexible RA capacity if there is a cumulative deficiency of flexible RA capacity.⁸ Prior to this tariff amendment, there were no flexible capacity requirements for load serving entities. The Commission-approved filing also established must offer obligations for resources providing flexible RA capacity. These new flexible capacity requirements were necessary to integrate the increasing number of variable energy resources on the CAISO grid and address changing grid conditions. As with certain other RA requirements, the CAISO developed flexible capacity requirements under its tariff in parallel with CPUC proceedings on the same topic.⁹

4. Capacity Procurement Mechanism

The CAISO has "backstop capacity procurement authority" under its capacity procurement mechanism (CPM) defined in section 43A of the CAISO tariff. Under the CPM, the CAISO can procure capacity either to fill un-remediated RA capacity deficiencies or to meet specified reliability needs. The CAISO allocates the costs of backstop procurement to load serving entities.

⁵ *Decision Adopting Local Procurement Obligations for 2012 and Further Refining the Resource Adequacy Program*, Cal. Pub. Util. Comm'n D.11-06-022 (June 23, 2011).

⁶ *Cal. Indep. Sys. Operator Corp.*, Transmittal Letter, FERC Docket No. ER12-2669-000 (Sept. 20, 2012).

⁷ *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,135 (2012).

⁸ *Cal. Indep. Sys. Operator Corp.*, 149 FERC ¶ 61,042 (2014).

⁹ *Id.* at P 2.

The CAISO has had a backstop procurement mechanism for many years. In 2007, the Commission approved an offer of settlement between the CAISO and various other parties to institute the Reliability Capacity Services Tariff (RCST).¹⁰ The settlement arose out of a Section 206 complaint proceeding. The RCST authorized the CAISO to procure backstop capacity and established the compensation for capacity procured under that authority. The RCST was followed by the Transitional Capacity Procurement Mechanism (TCPM),¹¹ the Interim Capacity Procurement Mechanism (ICPM),¹² and the initial Capacity Procurement Mechanism (CPM).¹³ The RCST, TCPM, ICPM, and initial CPM all shared the same basic approach—the CAISO compensated designated capacity based on an administrative price.

In 2015, the Commission approved a revised CPM framework that is in effect today.¹⁴ The current approach is based on a competitive solicitation process through which the CAISO pays designated capacity its bid price in the competitive solicitation. Resource offers in the competitive solicitation process are subject to a soft offer cap, although resources can cost-justify a higher offer with the Commission.

C. Reliability Services Initiative Phases 1 and 2

As the RA program has evolved, the CAISO and stakeholders have recognized that generator performance incentives should reflect whether resources meet their RA must-offer obligation, as opposed to whether they are merely subject to a forced outage. This shift in the focus for evaluating performance was a major impetus for the CAISO beginning the two-phase Reliability Services Initiative stakeholder process in 2014. Another focus was to improve and streamline the existing RA process to better meet the needs of an increasingly dynamic grid. Streamlining and simplifying the RA processes, to the extent feasible, will make it easier for generating units providing RA to understand how to meet their obligations and more efficient for load serving entities to meet their obligations. The CAISO has completed the stakeholder processes for both phases. The CAISO Board approved proposals arising out of Phase 1 of the reliability services initiative on March 26, 2015 and proposals arising from Phase 2 on October 27, 2016.

¹⁰ *Independent Energy Producers Association v. Cal. Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,069 (2006), *order on paper hearing*, 118 FERC ¶ 61,096 (2007).

¹¹ *Cal. Indep. Sys. Operator Corp.*, 123 FERC ¶ 61,229 (2008).

¹² *Cal. Indep. Sys. Operator Corp.*, 125 FERC ¶ 61,053 (2008).

¹³ *Cal. Indep. Sys. Operator Corp.*, 138 FERC ¶ 61,112 (2012).

¹⁴ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,001 (2015).

For implementation, the CAISO divided Phase 1 into two parts—Phase 1A and Phase 1B. Phase 1A focused on enhancing and streamlining the CAISO's RA rules and processes to meet the needs of an increasingly dynamic power grid. The major components of the filing included tariff provisions to: (1) enhance the existing tariff criteria for determining default qualifying capacity values of specified types of resource adequacy resources; (2) enhance the existing tariff provisions regarding the must-offer obligations of specified types of resource adequacy resources; (3) include a methodology for allocating flexible capacity needs to a load-following metered subsystem that is a load serving entity under the RA program; and (4) implement a new resource adequacy availability incentive mechanism to replace the standard capacity product mechanism and assess resource availability based on satisfaction of a resource's must-offer obligation. The CAISO filed the Phase 1A amendments on May 29, 2015, in Docket No. ER15-1825,¹⁵ and the Commission approved them in an order issued on October 1, 2015.¹⁶

The CAISO deferred the remaining RSI Phase 1 elements for implementation until RSI Phase 1B and has included them in the current tariff amendment filing. Phase 1B of the initiative includes stand-alone tariff revisions to: (1) streamline the outage evaluation process for RA capacity; (2) adjust the timeline for the monthly RA process; (3) cap a load serving entity's local RA requirement at its system requirement during the monthly RA process; and (4) create a default method for allocating flexible capacity backstop procurement costs for local regulatory authorities that elect to allocate flexible capacity needs but do not notify the CAISO of their method for allocating flexible backstop procurement costs.

This tariff amendment filing also includes the elements addressed in Phase 2 of the RSI initiative. Phase 2 addressed RA substitution rules and enhanced local and flexible RA requirements by proposing stand-alone tariff revisions that: (1) provide that capacity in a local area but procured and shown by a load serving entity as system capacity has a system, rather than local, substitution requirement; and (2) streamline the RA reporting obligations for small load serving entities. As indicated above, no tariff revision proposed herein is substantively interdependent with any of the other five tariff revisions. Modification to, or rejection of, one proposed revision will render no other proposed tariff revision unjust and unreasonable from a substantive perspective.

Both the Phase 1B and Phase 2 enhancements are presented for Commission approval through this filing.

¹⁵ *Cal. Indep. Sys. Operator Corp.*, Transmittal Letter, FERC Docket No. ER15-1825 (May 29, 2015) (Phase 1A Filing).

¹⁶ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,002 (2015).

II. PROPOSED TARIFF REVISIONS

A. Reliability Services Phase 1B

1. Streamline the Outage Evaluation Process for Resource Adequacy Capacity

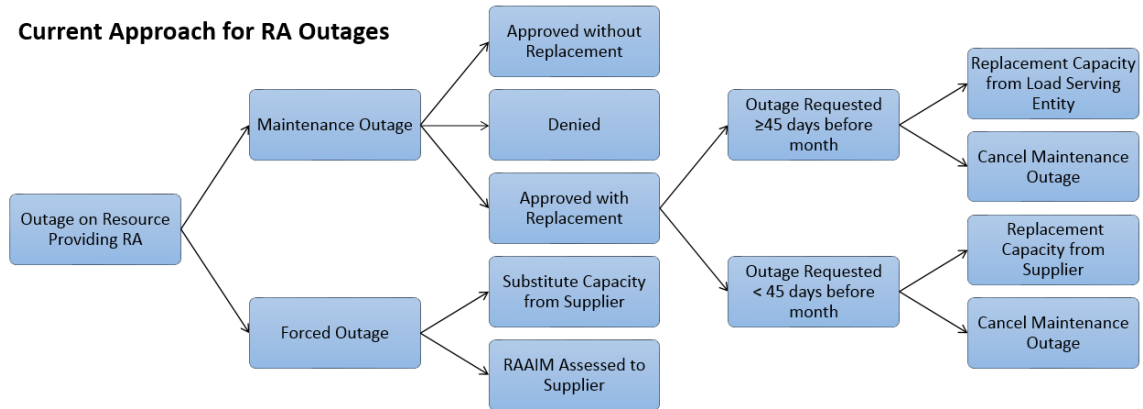
When a resource providing RA capacity goes on a maintenance outage or forced outage, the outage can trigger an obligation to provide capacity from an alternative resource to obtain CAISO approval of the outage and/or avoid RAIM charges. The mechanism for analyzing the impact of those outages and determining who bears responsibility for providing alternative capacity depends on both the type of outage and when the outage is submitted to the CAISO.

The CAISO tariff currently uses the term “replacement capacity” for maintenance outages. When a resource providing RA capacity submits a request for a *maintenance outage* to the CAISO, the CAISO evaluates whether it will have sufficient resources during the period of the proposed outage considering the remaining RA capacity and other already-approved and pending maintenance outages. If the proposed outage would cause projected resource insufficiency, then the CAISO will approve the outage contingent on the provision of capacity from an alternative resource. With maintenance outages, this alternative capacity is called “*replacement capacity*.” The responsibility for providing replacement capacity falls on the scheduling coordinator for either the load serving entity or the resource, depending on when the outage request is submitted. If the resource submits the outage request over 45 days before the start of the RA month, then the load serving entity must provide the replacement.¹⁷ If the resource submits the outage request less than 45 days before the start of the RA month, then the resource owner must provide the replacement capacity. Failure to provide replacement capacity will lead to the CAISO denying the outage request. If the designated replacement capacity does not perform, such capacity will be subject to RAIM charges.

The CAISO tariff uses the term “substitute capacity” for forced outages. Where a generating unit that supplies RA capacity must take a forced outage, the supplier must provide alternative capacity to avoid potential RAIM charges. This alternative capacity is called “*substitute capacity*.”

¹⁷ The rationale is that this is the deadline for submitting RA plans and a load serving entity should not get credit on its RA plan for a resource that will not be operationally available.

The following decision tree reflects the current outage process for generating units providing RA capacity:



The bifurcation of responsibilities between load serving entities and suppliers and between forced outages and maintenance outages creates several layers of complexity for the CAISO and market participants and has been a source of confusion. For example, a single resource often sells blocks of its total net qualifying capacity as RA capacity to multiple load serving entities. When that resource has a maintenance outage over 45 days in advance, the replacement requirement falls jointly on all of those load serving entities. Consider a simple example of a 100 MW resource that has sold 33.3 MW of RA capacity to three separate load serving entities. If that resource requests a maintenance outage with greater than 45-days' notice, then each of the three load serving entities must arrange with another supplier (or multiple suppliers) for replacement capacity. To determine if any of the load serving entities faces a replacement requirement, the CAISO first must evaluate whether that entity is long on operationally available capacity. If it has shown an excess amount of RA capacity from other resources, then the CAISO will not assign a replacement requirement to that load serving entity. Assuming none of the three load serving entities had excess capacity, then each would separately have to arrange for 33.3 MW of replacement capacity. That process takes time and effort for the load serving entities and clearly is not efficient. Once the load serving entities secure the replacement capacity, the CAISO must then separately validate each of the load serving entities' replacement capacity before it can approve the original supplier's requested maintenance outage. This is a complex process that requires coordination among multiple parties all to approve a single maintenance outage on a resource providing RA capacity. Although these issues are most acute where a resource has sold capacity to multiple load serving entities, issues can arise even when there is a one-to-one relationship between supplier and load serving entity.

Another complication occurs where the scope of an outage changes less than 45 days before the start of the RA month. Continuing the prior example, assume the 100 MW resource goes from a complete outage to a 50 percent derate 30 days prior to the RA month. The three load serving entities could then each be credited back with 16.6 MW of replacement capacity (*i.e.*, half of the 33.3 MW they had to provide before). From the CAISO's perspective, this presents another complicated accounting exercise. The CAISO must track which entities should be credited with replacement capacity and which entities have new replacement obligations, depending on whether the outage increased or decreased. For the load serving entity it may be too late to make an alternative use of the contracted capacity.

Further, the current rules create disparate consequences based on when the resource providing RA capacity submits the outage request to the CAISO. Under the rules that exist now, a maintenance outage can trigger a CPM designation if the supplier reports it over 45 days before the start of the RA month and the load serving entity does not provide replacement capacity. However, a maintenance outage submitted with less than 45-days' notice or a forced outage would not trigger a potential CPM designation under that specific tariff section.

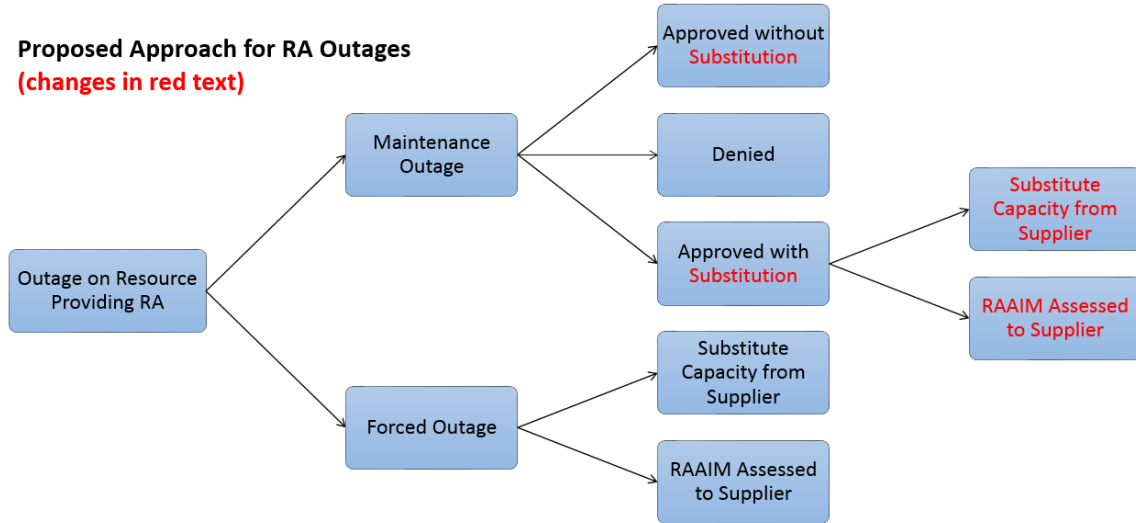
Finally, many suppliers expressed unease with the fact that when a supplier submits a maintenance outage request over 45 days before the RA month, the CAISO must share outage information with the load serving entity counterparty. Resource owners generally consider the details of their outage programs proprietary and confidential. However, the load serving entity needs details of the outage to verify the CAISO's calculation of the replacement requirement and to help it in coordinating procurement of the replacement capacity.

The CAISO proposes two key enhancements to simplify these mechanisms for the benefit of both market participants and the CAISO.¹⁸ The *first enhancement* the CAISO proposes is to eliminate the often confusing distinction between substitution and replacement. Going forward, the tariff will refer to all alternative capacity serving in place for resources on an outage, either forced or maintenance, as "substitute capacity." The *second enhancement* is to adjust the outage coordination process for RA capacity so responsibility for

¹⁸ These enhancements are largely reflected in the proposed amendments to CASIO tariff sections 9.3.1.3.1 (removing content from section with heading "Replacement Requirement for LSEs"); 9.3.1.3.2 (removing content from section with heading "CAISO Replacement Determination for LSE RA Plans"); 9.3.1.3.3 (conforming terminology changes, including eliminating use of term "replacement" and instead using term "substitution"); 40.9.3.6 (consolidating location in tariff related to substitution analysis); 40.9.3.6.1 (describing batched substitute capacity analysis for outages submitted by 25 days before the start of the RA month); and 40.9.3.6.2 (describing rolling substitute capacity analysis for outages after by 25 days before the start of the RA month).

providing substitute capacity for a maintenance outage (which currently is referred to as “replacement capacity”) will fall on the scheduling coordinator for the supplier regardless of when the outage request is submitted to the CAISO.

The following decision tree reflects the proposed outage process for generating units providing RA capacity:



The timing of when the supplier submits a maintenance outage request will still be relevant for two reasons. First, the CAISO will continue to grant priority to maintenance outage requests based on submission date.¹⁹ The earlier a maintenance outage is submitted, the greater the likelihood that the CAISO will approve the outage and the lower the likelihood that the outage, if approved, will require substitute capacity. Second, the CAISO will study all maintenance outage requests submitted 25 days or more before the start of the month at the same time and provide the results of its analysis by 22 days before the start of the month.²⁰ Regardless of whether a supplier submits an outage request four months before the RA month or 27 days, the CAISO will notify them at the same time whether substitute capacity is required. However, the request submitted four months in advance would have a greater chance of not being assigned a substitution requirement given the priority rules. The CAISO will consider outage requests submitted 24 days or fewer before the start of the RA month on a rolling

¹⁹ CAISO tariff, proposed section 40.9.3.6.1 (“If the CAISO determines that it will not have sufficient operationally available RA capacity to meet the CAISO system RA Reliability Margin for a particular day, then it will determine which resources must provide RA Substitute Capacity to be excluded from the RAIM calculation based on the reverse order of the dates on which the resources submitted the outage requests to the CAISO.”)

²⁰ CAISO tariff, proposed section 40.9.3.6.1.

basis.²¹ As is the case now, a forced outage will almost always require substitute capacity to avoid RAAIM charges.²² For all types of outages (forced outages, maintenance outages submitted over 25 days before the start of the month, and maintenance outages submitted less than 25 days before the month), the proposed tariff revisions allow suppliers until a deadline established in the business practice manual to provide substitute capacity or cancel/reschedule the outage, to avoid facing RAAIM charges.²³

Eliminating the replacement/substitution distinction and placing the substitution obligation solely on suppliers will eliminate the unwieldy set of rules that are necessary today to accommodate both load serving entity and supplier outage coordination. Under the proposed streamlined process, the CAISO can more easily approve or reject maintenance outages providing more certainty to the supplier. This is especially the case where multiple load serving entities have contracted for capacity from the same resource. The obligations for providing substitute capacity and the consequences of failing to provide it also will now be borne in all cases by the supplier, which is appropriate because the supplier is the party that is directly responsible for requesting a maintenance outage.²⁴ Finally, these changes will avoid the situation where a supplier must share information about its confidential outage management plans with a load serving entity counterparty because the load serving entity no longer will have a role in providing substitute capacity.

During the policy development stakeholder process, one stakeholder expressed concern with these changes because of the complications they would pose when the contractual obligation to provide replacement/substitute capacity is on the load serving entity but the tariff obligation falls on the supplier. That a contract was executed when different tariff provisions were in place and did not contemplate that the regulatory framework might change should not preclude ISOs and RTOs from implementing tariff revisions that provide broad benefits, result in significant market improvements or efficiencies, or address changed circumstances.²⁵ The regulatory framework and industry conditions are

²¹ CAISO tariff, proposed section 40.9.3.6.2.

²² The CAISO's Business Practice Manual for Reliability Requirements contains a table in section 9.5 detailing which forced outages types require substitution on RA capacity to avoid RAAIM charges.

²³ CAISO tariff, proposed sections 40.9.3.6.1 & 40.9.3.6.2.

²⁴ Proposed revisions to sections 43A.2.1.2, 43A.2.3, and 43A.2.7.2 further reinforce the principle that the impact of RA capacity outages will now fall entirely on suppliers. These sections clarify that CPM designations, the cost of which are borne by load serving entities, cannot be issued solely because capacity shown on a monthly RA plan is on a maintenance outage.

²⁵ See, e.g., *ISO New England Inc. & New England Power Pool Participants Comm.*, 132 FERC ¶ 61,136, P 24 (2010) ("LSEs have relied on the existing market rules to develop pricing, lock-in contracts and provide offers for default supply obligations. . . . Such reliance would not, by itself, preclude the Commission from accepting proposed tariff revisions").

constantly changing, and parties must know of that when they execute contracts. Parties can—and do—protect themselves against regulatory change in their contracts by including regulatory out, renegotiation, or other provisions. Any contractual issues that suppliers and load serving entities must rework on this relatively minor contractual issue must be weighed against the significant improvements to the overall RA process that all participants will enjoy from the CAISO's proposed changes. The concern expressed by the stakeholder is not a reasonable grounds for rejecting the CAISO's proposal.

During the tariff stakeholder process a few stakeholders expressed concern about the CAISO specifying in the tariff that the deadline for a supplier to provide substitute capacity for outages submitted over 25 days before the RA month would be defined in the business practice manual. The CAISO explained that it intends to set the deadline for providing substitute capacity as required by sections 40.9.3.6.1 and 40.9.3.6.2 at eight days before the start of the outage, and not with reference to the start of the RA month. At least at initial implementation, having a single substitution deadline for all maintenance outages, regardless of when requested, will make the process more administrable for the CAISO. As the CAISO gains more experience with the new rules and as technological and logistical factors shift over time and in furtherance of Phase 1B's policy goals, the CAISO needs the flexibility to move the deadline to match any shifts without having to make a section 205 filing with the Commission. The parties that object to the CAISO's intended approach to these deadlines claimed that Diagram 18 from Appendix D of the Draft Final Proposal Addendum suggested that the CAISO committed to enforce a fixed deadline at eight days before the start of the RA month.²⁶ These objecting parties suggested that any deviation from the deadline they claimed was suggested in that diagram marks a deviation from the final policy that the CAISO Board approved. The diagram from Appendix D of the policy paper, however, was merely an illustrative guide; the policy was "to streamline the monthly process by removing any complexity that was unnecessary to maintain the safety and reliability of the grid in real-time."²⁷ The Commission has long recognized that only practices that significantly affect rates terms, or conditions must be included in the tariff, but items better classified as implementation details may be reserved for inclusion in a business practice manual.²⁸ The CAISO has included numerous deadlines like this in its business practice manuals because they are implementation details.²⁹

²⁶ Draft Final Proposal Addendum, at 90.

²⁷ Draft Final Proposal Addendum, at 73.

²⁸ *Cal. Indep. Sys. Operator Corp.*, 154 FERC ¶ 61,200, P 4 (2016); *Cal. Indep. Sys. Operator Corp.*, 119 FERC ¶ 61,076, P 656 (2007).

²⁹ For example, in the RSI 1 tariff amendment proceeding, the Commission accepted the CAISO's proposal to replace an existing tariff provision that stated that RA substitutions are allowed prior to the close of the day-ahead market for the next trading day with a tariff provision stating that such substitutions are allowed within the timeline specified in the business practice

The deadline is driven by CAISO technology and business process constraints, such as the time needed to confirm that the substitute capacity being provided is qualified to serve as substitute capacity. Absent practical limitations like this, the interests of streamlining the RA process would call for making the deadline as short as possible.

2. Adjust the Monthly Resource Adequacy Timeline

Under the current RA process, the CAISO conducts the daily outage assessment and replacement/substitution analysis at the same time it validates the monthly RA showings and conducts any needed monthly backstop capacity procurement under its CPM authority.

Under existing tariff provisions, monthly RA plans and supply plans are due at least at least 45 days before the RA month.³⁰ The CAISO then performs its deficiency and mismatch validations and notifies the load serving entities and suppliers of the results by 25 days before the RA month.³¹ Load serving entities and suppliers have until 11 days before the start of the month to correct any errors or mismatches between RA plans and supply plans. If any RA deficiencies remain unresolved at the end of the cure period, the CAISO can procure backstop capacity under the CPM.

At the same time the CAISO evaluates RA plans and suppliers and load serving entities address any issues with the plans, the CAISO also assesses outage requests from resources providing RA capacity for potential replacement requirements. By 25 days before the start of the month, the CAISO assigns replacement requirements to load serving entities for any maintenance outages reported 45 or more days before the start of the RA month. Load serving entities then have until 11 days before the start of the RA month to provide their replacement capacity. This is the same deadline for any final changes to the RA and supply plans. If the load serving entity has not provided replacement capacity by that point, then the CAISO will cancel or deny the outage. If the supplier still must take the outage, then the outage can move forward as a forced outage, but the supplier must then provide substitute capacity or face potential RAIM charges. The CAISO evaluates maintenance outages requested by the supplier less than 45 days before the start of the RA month on a rolling basis and

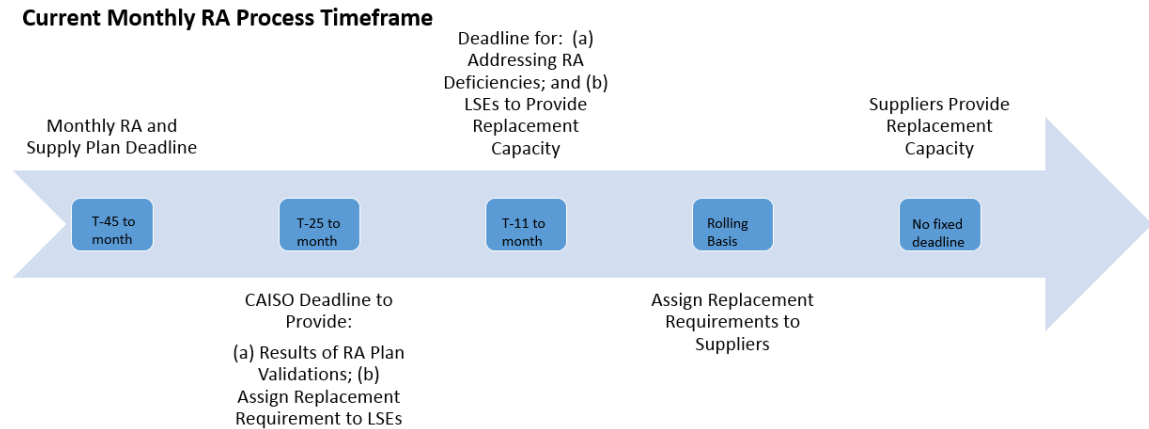
manual. *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,002, P 92 (2015), *order on reh'g*. 154 FERC ¶ 61,200 (2016). The Commission stated that the “detailed timeline for substitution of resource adequacy capacity is more appropriately classified as an implementation detail.” 153 FERC ¶ 61,002, at P 92. The rehearing order noted that that “the detailed timeline for substitutions of resource adequacy capacity was analogous to other timelines currently in the business practice manual.” 154 FERC ¶ 61,200, at P 1.

³⁰ CAISO tariff, sections 40.2.1.1(a), 40.2.2.4(b), 40.4.7.1(b), 40.10.5.1(c)(4), and 40.10.5.2(c)(3).

³¹ CAISO tariff, proposed sections 40.7(a), 40.10.5.4(a)(2), & 40.10.5.6(a)(3).

works with suppliers to provide replacement capacity before the outage is planned to start or alternatively denies the requested maintenance outage.

The following chart reflects the current timeline for the monthly RA process:



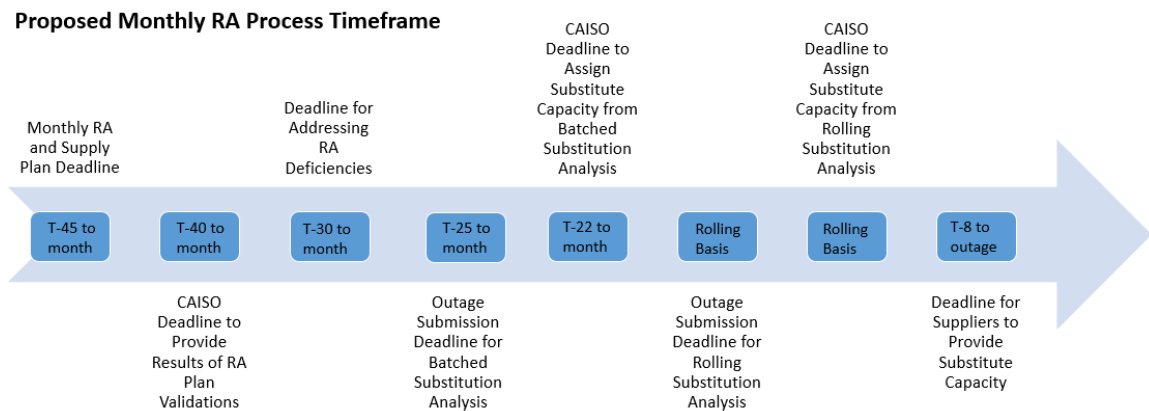
The current timeline is problematic because the processes for curing RA showing deficiencies and the replacement requirement overlap. This overlap between the two processes creates inefficiencies, unnecessary complexity, and potential over-procurement. A simple example involving three load serving entities illustrates this phenomenon. One load serving entity, LSE1, shows an RA deficiency of 50 MW of system capacity its initial monthly RA plan; a second load serving entity, LSE2, has a contracted RA resource that has submitted a maintenance outage request for 50 MW of system capacity before the monthly RA plan submission deadline; and a third load serving entity, LSE3 has shown 50 MW of excess system capacity on its monthly plan. In this example, at 25 days before the start of the RA month, the CAISO would notify LSE1 of its 50 MW RA deficiency as part of the monthly RA plan validation process. The CAISO separately would assign a replacement requirement to LSE2 for 50 MW because the CAISO would not yet know if LSE1 will remedy its deficiency. If the CAISO knew that for certain that LSE 1 would remedy its deficiency, then the 50 MW excess shown by LSE3 would allow LSE2 to forego providing replacement capacity because the CAISO would have met its capacity needs. However, LSE2 does not have to provide its replacement capacity until 11 days before the start of the month. At 11 days before the start of the month, if LSE2 remedies its deficiency and LSE3 meets its replacement requirement, then the CAISO will have 50 MW of excess capacity not needed to meet the RA requirements.

The CAISO proposes to alter the timeline for the monthly RA process so RA plan validation and any potential CPM procurement will happen earlier and be completed before the CAISO performs any outage or substitution assessment. RA plans and supply plans will still be due at least 45 days before

the RA month.³² Under the proposed timeline, the CAISO will perform its deficiency and mismatch validations and notify the load serving entities and suppliers of the results by 40 days before the RA month, instead of the current 25 days.³³ Load serving entities and suppliers would then have until 30 days before the RA month, rather than the current 11 days, to correct issues in the RA or supply plans.³⁴

To make the process more transparent and less confusing, the CAISO also proposes to clarify what circumstances warrant changes to either a supply plan or RA plan between 45 days and 30 days before the RA month. The existing tariff refers generally to “errors” and in a few instances to “mismatches.” The CAISO clarifies that with a supply plan, a change only may resolve a discrepancy between the supply plan and the RA plan. For an RA plan, a change will be permitted either to resolve a discrepancy between the supply plan and RA plan or to alleviate a deficiency identified by the CAISO through its validation conducted by 40 days before the start of the RA month. Any RA deficiencies that remain unresolved at the end of the cure period will then be subject to remediation through a CPM designation under the CAISO’s existing CPM authority. Starting at 25 days before the RA month, the CAISO will begin the outage assessment procedures described above, beginning with the batched outage assessment conducted by 22 days before the start of the month³⁵ and then moving into the rolling outage assessment.³⁶

The following chart reflects the proposed timeline for the monthly RA process:



³² CAISO tariff, sections 40.2.1(a), 40.2.2.4(b), 40.4.7.1(b), 40.10.5.1(c)(4), and 40.10.5.2(c)(3).

³³ CAISO tariff, proposed sections 40.7(a), 40.10.5.4(a)(2), 40.10.5.6(a)(3).

³⁴ CAISO tariff, proposed sections 40.2.2.4(c) & 40.4.7.1 (c), 40.7(c), 40.10.5.1(d), and 40.10.5.2(d).

³⁵ CAISO tariff, proposed section 40.9.3.6.1.

³⁶ CAISO tariff, proposed section 40.9.3.6.2.

This proposal will streamline the monthly process by removing complexity associated with the RA process that is unnecessary to maintain the safety and reliability of the grid in real-time. By allowing the monthly RA process to conclude before the CAISO evaluates planned outages for replacement (referred to prospectively as substitute) capacity, the CAISO can now evaluate outages knowing whether any RA deficiencies have been remedied. This benefits market participants by reducing the potential for over-procurement. It also benefits the CAISO by allowing it to focus on closing out the monthly RA process before turning to the outage analysis process, rather than having to conduct both processes in parallel. Finally, it benefits all market participants by moving the outage impact assessment closer to the start of the RA month, which will allow the CAISO to make its assessments with more reliable and complete information. No stakeholders opposed these changes during the CAISO's stakeholder process.

3. Cap a Load serving Entity's Local Capacity Requirement to its System Requirement

Under the current RA program, a load serving entity's system and local capacity requirements are calculated in different ways. A load serving entity's *system requirement* in a RA month is based on the one-in-two-year forecasted peak load for that month,³⁷ plus the reserve margin determined by its local regulatory authority. Under this methodology, a load serving entity with different load patterns across the year will face different system capacity requirements across the year. This results in load serving entities showing in their RA plans different system requirements each month of the year. The *local requirement* is based on the one-in-ten-year peak load forecast in the peak month of the year for that load serving entity in a particular Local Capacity Area.³⁸ Unlike the system RA requirement, the local capacity requirement assigned to each load serving entity is static across the entire year. A load serving entity must show in its RA plans the same amount of required local capacity each month of the year. Because of these different methodologies, a load serving entity's peak demand plus reserve margin (which is 15% for CPUC-jurisdictional utilities) in a month may be lower than the static local requirement that remains constant across all 12 months of the year. This situation is particularly likely for load serving entities that have high local requirements relative to their system requirements.

³⁷ The one-in-two peak forecast for a load serving entity represents the level at or below which that load serving entity's load would be expected to peak 50 percent of the time. Half the time the peak load for that month would be expected to be above the one-in-two peak forecast and half the time it would be expected to be below that level.

³⁸ The one-in-ten forecast represents the load level at or below which the load serving entity's load would be expected to peak 90 percent of the time. That is, the peak load would be expected to fall at or below the one-in-ten forecast 90 percent of the time.

Load serving entities faced with the situation of local requirements exceeding their system requirements raised this issue with the CAISO and argued it was illogical and unreasonably costly to require them to show in monthly RA plans local capacity greater than the system requirement. They argued that maintaining the status quo is not just and reasonable because it allows for the illogical situation where the whole (system capacity requirements) is less than the sum of its parts (local capacity requirements). They claimed that under these circumstances, there is no reliability reason the CAISO should require load serving entities to procure additional local capacity each month beyond the level of their peak demand and reserve margin requirements. They contended that absent any identified reliability need, requiring load serving entities to procure local capacity in excess of system capacity each month imposes unwarranted procurement costs on them.

The CAISO largely agrees with these concerns. It proposes to amend its tariff to cap the amount of local capacity a load serving entity must show on its monthly RA plan for a month at its peak demand and reserve margin requirement for that month.³⁹ The CAISO stresses this is a narrow and targeted revision. In months where the peak demand and reserve margin requirement is less than the local requirement, the CAISO will still receive local RA capacity up to the updated forecasted peak demand and reserve margin for that month. Further, the proposed change will apply only to the monthly RA process and not to the annual RA process. The CPUC adopted a parallel requirement in its annual RA proceeding for its jurisdictional load serving entities.⁴⁰

³⁹ CAISO tariff, proposed section 40.3.2 ("In no instance, however, is a Load Serving Entity obligated to commit, on a monthly Resource Adequacy Plan, Local Capacity Area Resources in a particular TAC Area in excess of the quantity of capacity needed by that Load Serving Entity to meet its applicable Demand and Reserve Margin requirements for the applicable compliance month.").

⁴⁰ *Decision Adopting Local Procurement and Flexible Capacity Obligations for 2016, and Further Refining the Resource Adequacy Program*, Cal. Pub. Util. Comm'n D.15-06-063, at 51-54 (June 25, 2015).

The following table presents a stylized example of how this proposed rule would affect a hypothetical load serving entity.

Sample Load Serving Entity

	System Requirement	Calculated Local Requirement	Revised Local Requirement	Benefit of Proposal
January	130	175	130	45
February	155	175	155	20
March	165	175	165	10
April	170	175	170	5
May	185	175	175	0
June	190	175	175	0
July	185	175	175	0
August	175	175	175	0
September	170	175	170	5
October	165	175	165	10
November	155	175	155	20
December	130	175	130	45

The CAISO anticipates this proposed change will have a narrow and limited impact on a handful of load serving entities. Evaluation of the monthly RA requirements for the 2016 RA year and the 2017 RA year through October, shows that 7 out of 63 load serving entities would have benefited in at least one month from this proposal. Across the 22 months evaluated, the percentage reduction in total local capacity required to be shown across all three CAISO TAC areas would have ranged from 0% to 7%. The impact is most significant in the San Diego TAC area, where the percentage reduction would have ranged from 0% to 20% across the months.

The following table provides a high-level summary of the impact this proposal would have had in each of the three TAC areas.

Reduction in Local Capacity Required as Percent of Current Requirement

Month	PGE TAC Area	SCE TAC Area	SDGE TAC Area	Total Local Capacity
January-16	0%	0%	0%	0%
February-16	2%	2%	0%	2%
March-16	0%	0%	3%	2%
April-16	0%	0%	10%	2%
May-16	0%	0%	4%	2%
June-16	0%	0%	0%	1%
July-16	0%	0%	0%	0%
August-16	0%	0%	0%	0%
September-16	0%	0%	0%	0%
October-16	0%	0%	0%	0%
November-16	0%	0%	0%	0%
December-16	0%	0%	0%	0%
January-17	0%	0%	13%	2%
February-17	0%	0%	15%	5%
March-17	1%	1%	19%	6%
April-17	0%	0%	20%	7%
May-17	0%	0%	18%	6%
June-17	0%	0%	14%	5%
July-17	0%	0%	2%	3%
August-17	0%	0%	0%	0%
September-17	0%	0%	0%	0%
October-17	0%	0%	5%	1%

Although the anticipated breadth of the change is limited, where this provision applies it will “free up” local capacity to be substitute capacity for other local resources on maintenance or forced outages reducing the suppliers’ exposure to potential RAIM charges. Also, the capping methodology will alleviate the need for local capacity to provide substitution in cases where there is no reliability need to do so because there already is sufficient local capacity to meet the system need in that local area for the month.

Stakeholder positions on this proposal were mixed. The CPUC supports the proposal because it will save costs and prevent load serving entities from contracting for excess local resources. Indeed, as indicated above, the CPUC

has already approved this feature in its annual RA proceeding.⁴¹ SDG&E also supports the proposal, so long as the CPUC adopts a parallel provision in its resource adequacy program, which it has.⁴²

During the tariff stakeholder process, the CAISO proposed to apply the capping methodology to both the annual and monthly RA processes. Some stakeholders were concerned this approach contradicted other statements the CAISO made in documents from the policy development stakeholder process and in the CPUC's RA proceeding. The CPUC's decision to cap local RA showings at the system level only in the monthly RA plans was based on the CAISO's statements regarding this matter.⁴³ Recognizing its prior statements, the CAISO acknowledged its policy intent from the outset was for the proposal to apply only to the monthly RA showings. This approach supports annual contracts for all needed local capacity while ensuring that capacity in excess of system needs will be available as substitute capacity in months where it is not reflected in a RA plan.

A few stakeholders do not support the proposal. One argues that the proposal does not treat all load serving entities fairly. The CAISO disagrees. The CAISO acknowledges that because of this proposal technically some load serving entities will not have to meet a local requirement based strictly on their one-in-ten peak load. However, it is impossible for a load serving entity's local load to exceed its system load. The proposed revision is fair and reasonable because all load serving entities will have their local requirement capped according to the same rule. Whether or not a specific load serving entity will be affected by the rule will depend on its unique circumstances, but that does not make the proposal unduly discriminatory. All similarly situated load serving entities will be treated similarly.

Finally, some stakeholders opposed the change claiming that it might diminish reliability. The CAISO found no basis for such claims. First, the proposal will have a relatively small impact on local capacity shown in certain months compared to the showings under the existing rules. Second, capacity that a load serving entity shows on a RA plan in most months but not in a few months does not disappear, particularly where that capacity still must be shown for all 12 months on the annual RA plan and in higher load months. The capacity that need not be shown for certain monthly RA plans remains available for substitution when resources go on forced or planned outages. Moreover, if a load serving entity has not procured sufficient local capacity, the CAISO retains

⁴¹ *Id.*

⁴² *Id.*

⁴³ See *id.* at 52 (The CAISO notes the cap should not apply to the annual showings for two reasons. . . This approach is consistent with the CAISO's proposal in the Reliability Service initiative") & 54 ("We adopt the CAISO's proposal to cap local RA requirement at monthly system RA requirements.").

its existing CPM authority to procure backstop capacity to remedy any local RA deficiencies or collective local deficiencies. Further, the CAISO has authority to exceptionally dispatch both RA and non-RA capacity if necessary to maintain reliability.

4. Create a Default Methodology for Allocating Flexible Capacity CPM Costs

Section 43A.8.8 of the CAISO tariff describes the allocation of flexible capacity CPM costs, *i.e.*, costs the CAISO incurs to procure backstop flexible capacity if there is a deficiency in flexible RA capacity procurement. The allocation methodology depends on whether the local regulatory authority has established its own method of allocating the costs.⁴⁴ Section 43A.8.8(b)(2) provides that if a local regulatory authority “has not established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will allocate the Flexible Capacity CPM costs proportionately to the Scheduling Coordinator of each jurisdictional Load Serving Entity that failed to meet its procurement obligation.” In contrast, section 43A.8.8(c) requires the CAISO to use the local regulatory authority’s allocation methodology if it has adopted one. However, section 43A.8.8(c) inadvertently does not address what happens if a local regulatory authority adopts such an allocation methodology but does not timely notify the CAISO of its methodology. Under such circumstances, it is unclear when the CAISO may proceed using the approach outlined in section 43A.8.8(b)(2). Absent certainty, the CAISO either could leave the costs unallocated, which would threaten the CAISO’s revenue neutrality, or allocate the costs right before the local regulatory authority was about to communicate its allocation methodology, which would undermine the local regulatory authority’s general primacy in establishing an allocation methodology for its load serving entities.

Although the CAISO has yet to face the situation where a local regulatory authority has not timely provided its flexible capacity CPM cost allocation methodology, out of an abundance of caution and to be prepared if it has to address the issue at some future point, the CAISO proposes to add a provision addressing this issue to section 43A.8.8(c):

If the Local Regulatory Authority does not notify the CAISO of its allocation method by the deadline established in the relevant Business Practice Manual, then the CAISO allocates Flexible Capacity CPM

⁴⁴ This is a separate issue from determining what each load serving entities’ flexible capacity requirements are. As described above, the CAISO determines how much total flexible capacity the load serving entities under the jurisdiction of a particular local regulatory authority must procure. It is up to the local regulatory authority to then assign requirements to its individual jurisdictional load serving entities. The proposed provision, however, deals with allocating the costs of a CPM designation made in the event that the load serving entities are deficient in procuring the flexible capacity assigned by their local regulatory authority.

costs using its default allocation methodology under Section 43A.8.8(b)(2).

The only significant stakeholder feedback on this proposed addition came from the CPUC, which wanted to ensure that the CAISO was seeking only to create a deadline for local regulatory authorities to notify the CAISO of the applicable CPM cost allocation methodology and not a deadline for providing actual flexible capacity requirements. In the CPUC's view, the latter would have infringed on a local regulatory authority's primary role in setting resource adequacy requirements. The CAISO believes that its proposed language clearly addresses the former and, thus, is consistent with the CPUC's objective.

B. Reliability Services Phase 2

1. The CAISO Proposes to Allow Capacity Located in a Local Capacity Area That is Procured and Shown as System Capacity To Have a System Substitute

Under section 40 of the CAISO tariff, load serving entities submit annual and monthly RA plans that show the resources they have procured to satisfy their separately-established peak demand and reserve margin (*i.e.*, system RA) requirements, local capacity area resource requirements, and flexible RA capacity requirements.

Annually the CAISO undertakes a Local Capacity Technical Study to "identify Local Capacity Areas, determine the minimum amount of Local Capacity Area Resources in MW that must be available to the CAISO within each identified Local Capacity Area, and identify the Generating Units within each identified Local Capacity Area."⁴⁵ In the Local Capacity Technical Study, the CAISO determines the minimum Local Capacity Area Resources needed to address the contingencies in the tariff.⁴⁶ Based on the results of the Local Capacity Technical Study, the CAISO "will allocate responsibility for Local Capacity Area Resources to Scheduling Coordinators for Load Serving Entities generally based on LSE load share within the TAC area."⁴⁷ Once the CAISO has allocated the total responsibility for Local Capacity Area Resources, the CAISO informs the Scheduling Coordinator for each load serving entity of the load serving entity's specific allocated responsibility for Local Capacity Area Resources in each TAC areas in which the load serving entity serves load. Under tariff section 40.7, the CAISO evaluates whether annual and monthly RA plans submitted on behalf of load serving entities demonstrate they have

⁴⁵ CAISO tariff, section 40.3.1.

⁴⁶ *Id.*

⁴⁷ CAISO tariff, section 40.3.2(a).

procured their allocable share of Local Capacity Area Resources under tariff section 40.3.2.

Under current substitution rules in the tariff,⁴⁸ a resource in a local capacity area providing RA capacity that takes a forced outage must substitute its capacity with another resource in the same local capacity area regardless of whether the load serving entity procured the RA resource to meet a local reliability requirement. In other words, a resource in a local capacity area procured as RA system capacity must still be substituted for with a local capacity area resource.⁴⁹ Several suppliers requested that the CAISO remedy this inequitable aspect of the CAISO's rules based on their account of how load serving entities procure RA capacity. They indicated that once a load serving entity has procured sufficient local capacity to meet its local capacity obligations under tariff section 40.3, it will publish a solicitation for its remaining needed system capacity. Remaining uncontracted local capacity that successfully responds to a system capacity solicitation will be procured to meet the load serving entity's system capacity requirements. However, under the CAISO's rules, such system capacity holds the same obligations as capacity that load serving entities procured specifically to meet their local capacity requirements. Suppliers argued that the result is that remaining capacity in the local area that is unnecessary to meet a load serving entity's local capacity requirements likely will be paid less (because system capacity is a less constrained product), even though under the CAISO's rules it must provide the same service and face the same substitution obligations as capacity in the local area procured as a local capacity area resource. In particular, if such a (system) resource goes on a forced outage, it can only be substituted for with a local capacity area resource in the same local capacity area. Suppliers stated this usually means they must pay a premium for the substitute capacity (because there are fewer options available to them). They argued equity requires that they be permitted to replace capacity in a local capacity area but procured as system capacity with other system capacity, and not be required to replace such system capacity with a local capacity area resource.

The CAISO agrees with these concerns, and the procurement data available to the CAISO supports the suppliers' arguments. In that regard, the 2016 Resource Adequacy Report issued by the CPUC's Energy Division states that the "weighted average price of local RA capacity is 31% higher than the

⁴⁸ CAISO tariff, sections 40.9.3.6.1(b) & 40.9.3.6.2(b).

⁴⁹ The tariff defines a "Local Capacity Area Resource" as a "Resource Adequacy Capacity from a Generating Unit listed in the technical study or Participating Load or Proxy Demand Resource or Reliability Demand Response Resource" that is located within a Local Capacity Area capable of contributing toward the amount of capacity required in a particular Local Capacity Area."

weighted average price of system RA capacity. This is expected as local RA is a more constrained product.”⁵⁰

To address this equity issue, the CAISO proposes to allow resources in a local capacity area to provide substitute capacity based on how they were procured. If a resource in a local area is procured as a local capacity area resource and identified as such through the RA showing process, then an outage will require substitute capacity from another resource in that local capacity area. The CAISO proposes to define such local capacity with a local substitution obligation as “Listed Local RA Capacity.”⁵¹ On the other hand, if RA capacity resource is procured and shown in the RA showing process as system RA capacity, the supplier can substitute for such capacity with system capacity, even if the RA resource is in a local capacity area. Thus, if a supplier substitutes a system-level resource for a local RA resource procured and shown as system RA, it will avoid potential RAIM charges.

Under the CAISO proposal, load serving entities and suppliers will have the option, but not requirement, to identify local capacity on their RA plans and supply plans, respectively, as Listed Local RA Capacity.⁵² With an unresolved

⁵⁰ The report is available at <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442453942>.

The report shows that the average price for Local RA Capacity Contracts for the period 2016-2020 is \$2.91/kW-month, and the average price for CAISO System RA Capacity contracts is \$1.82/kW-month. See Table 7. The report shows that for the SP26 area the average price of Local RA Capacity Contracts is \$3.42/kW-month compared to an average CAISO System Capacity Contract price of \$1.37/kW-month. *Id.* The report shows that for the NP26 area the average price of Local RA Capacity Contracts is \$2.06/kW-month compared to an average CAISO System Capacity Contract price of \$1.89/kW-month; although, the weighted average price is higher for NP26 system than NP26 local. *Id.* The CAISO notes that the data provided in the report is limited, but it is the only cost data available to the CAISO. The CAISO notes that in its RSI 1 order, the Commission approved the price proposed by the CAISO to assess RAIM non-availability charges based in part on the high average of RA capacity prices reflected in the 2012 annual Resource Adequacy Report. *Cal. Indep. Sys. Operator Corp*, 153 FERC ¶ 61,002, PP 24 & 50 (2015).

⁵¹ Appendix A of the CAISO tariff includes the proposed defined term “Listed Local RA Capacity,” which is: “capacity of Local Capacity Area Resources that, subject to resolution of a potential discrepancy as provided in Section 40.7(b), is identified on a Load Serving Entity’s Resource Adequacy Plan and a supplier’s corresponding Supply Plan as being obligated (for the purposes of sections 40.9.3.6.7 and 40.9.3.6.8) to provide RA Substitute Capacity from the same Local Capacity Area as the Listed Local RA Capacity.”

⁵² CAISO tariff, proposed sections 40.2.2.4(a) (load serving entities “may identify a Local Capacity Area Resource as Listed Local RA Capacity” on the annual RA plan); 40.2.2.4(b) (load serving entities “may identify RA Capacity from [local resources] as Listed Local RA Capacity” on the monthly RA plan); 40.4.7.1(a) (suppliers “may identify a Local Capacity Area Resource as Listed Local RA Capacity” on the annual supply plan); & 40.4.7.1(b) (suppliers “may identify a Local Capacity Area Resource as Listed Local RA Capacity” on the monthly supply plan).

discrepancy between a RA plan and supply plan, the CAISO will continue to default to the supply plan as it does under the tariff for all other types of RA capacity.⁵³ Proposed revisions to section 40.7(a) explain that the “CAISO will evaluate compliance with the responsibility for demonstrating Local Capacity Area Resources in two phases.” The first phase “will be made without regard to capacity’s identification as Listed Local RA Capacity.” This “physical local check” maintains the status quo, in which the CAISO evaluates compliance with local capacity obligations based on where capacity is physically located. The CAISO’s proposal will not undermine reliability because in its first phase assessment the CAISO will continue to assess local capacity showings in the same manner it always has. The second phase, what can be referred to informally as the “Listed Local check,” “will consider capacity to be a Local Capacity Area Resource only if it is also Listed Local RA Capacity.” Through the Listed Local check, the CAISO will determine whether the quantity of Listed Local capacity shown on a load serving entity’s RA plan meets or exceeds that entity’s local capacity obligation.

The CAISO is not proposing to change its backstop capacity procurement provisions under the capacity procurement mechanism.⁵⁴ If the CAISO identifies a deficiency in the first phase physical local check, the CAISO may procure backstop capacity under the CPM and allocate the CPM costs consistent with the existing tariff. The CAISO’s determination of whether a deficiency in local capacity necessitates backstop procurement will follow the same approach it does today. The CAISO will continue to evaluate the sufficiency of local capacity RA showings for potential CPM based on the physical local check.

The consequence of a deficiency the CAISO identifies in the second phase Listed Local check is that “the CAISO may notify the relevant Local Regulatory Authority of the insufficiency.”⁵⁵ The CAISO is not revising the CPM to allow it also to utilize the CPM to procure backstop capacity for a mere failure to show sufficient Listed Local RA Capacity. At this time, the CAISO views using the CPM authority based only on a Listed Local deficiency as unnecessary and likely to impose unnecessary costs. Regardless of its substitution obligations or how it is characterized, in-service capacity in a local area provides local capacity. Only after that capacity goes on outage and the resource owner provides substitute capacity from a system resource located outside of the local area will the CAISO face a potential deficiency of capacity in a local area. That event would happen intra-month well after the Listed Local check occurs. Any exercise

⁵³ CAISO tariff, section 40.7(b) (renumbered from 40.7(c)) (in case of an unresolved mismatch, “the CAISO will use the information contained in the Supply Plan”).

⁵⁴ CAISO tariff, sections 43A.2.1.1, 43A.2.1.2, & 43A.2.2 (CPM authority for deficiencies in Local Capacity Area Resources are made “irrespective of status as Listed Local RA Capacity”).

⁵⁵ CAISO tariff, proposed section 40.7(a) (“If, after providing any needed opportunity to resolve identified discrepancies as required by Section 40.7(b), the CAISO identifies an insufficiency through Phase 2 of the Local Capacity Area Resource sufficiency evaluation, then the CAISO may notify the relevant Local Regulatory Authority of the insufficiency.”).

of CPM authority based exclusively on a Listed Local deficiency could be seen as the CAISO acting unnecessarily, or at best, speculatively and prematurely.

The following simple examples demonstrate the mechanics of the CAISO proposal.

Example 1

LSE1 system requirement=500 MW

LSE1 local requirements=200 MW

LSE1 RA Plan

	RA Capacity in MW	System or Local	Listed Local on Plan?
ResA	200	System	N/A
ResB	200	Local	Yes
ResC	100	System	N/A

Supply Plans

	RA Capacity in MW	System or Local	Listed Local on Plan?
ResA	200	System	N/A
ResB	200	Local	Yes
ResC	100	System	N/A

Example 1 reflects a straightforward example of a load serving entity meeting its obligations. In this example, the load serving entity, LSE1, has a system requirement of 500 MW and a local requirement of 200 MW for the hypothetical month. LSE1's RA plan shows three resources (ResA, ResB, & ResC) to meet its requirements. The separate supply plans submitted for those three resources match the information LSE1 has submitted so for LSE1 in this month, the CAISO would not need to follow the procedures for discrepancies. The total capacity of the three resources sums to 500 MW, so LSE1 has shown sufficient system capacity. ResB is a 200 MW local resource that is also Listed Local. Because of this 200 MW LSE1 has shown sufficient capacity for both the physical local check and the Listed Local check.

Example 2

LSE2 system requirement=500 MW

LSE2 local requirements=200 MW

LSE2 RA Plan

	RA Capacity in MW	System or Local	Listed Local on Plan?
ResD	200	System	N/A
ResE	200	Local	Yes
ResF	100	System	N/A

Supply Plans

	RA Capacity in MW	System or Local	Listed Local on Plan?
ResD	200	System	N/A
ResE	200	Local	No
ResF	100	System	N/A

Example 2 shows a discrepancy between the RA plan and ResE’s supply plan. The RA plan identifies ResE as Listed Local, but the supply plan does not identify this local resource as Listed Local. Regardless of the discrepancy, LSE2 has shown 500 MW of system RA so it has shown sufficient system RA. Similarly, it has shown sufficient capacity for the physical local check because LSE2’s requirement was 200 MW of local capacity, which it showed. The discrepancy does, however, impact whether LSE2 is deficient in the Listed Local check. If the discrepancy is not resolved, the CAISO will default to the supply plan and will not consider ResE to be listed local. LSE2 will be deficient in the Listed Local check by 200 MW, and the CAISO may notify the applicable local regulatory authority.

Example 3

LSE3 system requirement=500 MW

LSE3 local requirements=400 MW

LSE3 RA Plan

	RA Capacity in MW	System or Local	Listed Local on Plan?
ResG	300	System	N/A
ResH	150	Local	No
ResI	200	Local	Yes

Supply Plans

	RA Capacity in MW	System or Local	Listed Local on Plan?
ResG	300	System	N/A
ResH	150	Local	Yes
ResI	200	Local	Yes

Example 3 shows a discrepancy between the RA and supply plans for ResH. The scheduling coordinator for ResH has indicated it is Listed Local, but LSE3 has indicated on the RA plan that ResH is not Listed Local capacity. Regardless of that discrepancy, LSE3 has shown sufficient system capacity, providing 150 MW over its system requirement. The identified discrepancy also does not influence the outcome of the physical local check, which indicates that ResH and ResI, together, provide 350 MW of local capacity. Because LSE3 has a local obligation of 400 MW, the physical local check would reflect a 50 MW deficiency, and the CAISO would inform LSE3 and its local regulatory authority of this deficiency. Under existing tariff provisions, LSE3 would then either “(i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan; or (ii) advise the CAISO that [its local regulatory authority] has determined that no deficiency exists.”⁵⁶ If LSE3 does not pursue either of those two options then it will be deficient for the month and must accept the potential CPM cost allocation consequences if the CAISO procures backstop capacity to remedy the deficiency. In this example, assume the Listed Local discrepancy is resolved by LSE3 realizing it mistakenly failed to indicate on its RA plan that ResH was Listed Local. After resolving this discrepancy, LSE3 would show 350 MW of Listed Local, reflecting a deficiency in the Listed Local check of 50 MW. The CAISO then would have authority to notify the local regulatory authority of this deficiency as well.

The CAISO’s proposal is more equitable than the existing approach because it aligns substitution obligations with the category of the capacity being

⁵⁶ CAISO tariff, section 40.7(a).

procured (*i.e.*, capacity procured as system RA, regardless of its location, will have a system-level substitution obligation). Substitute capacity for Listed Local Capacity must be in the same local capacity area. The expanded pool of potential substitute capacity for local capacity that is not Listed Local also enhances efficiency by making it easier for such local resources to take a maintenance outage or find substitute capacity if it goes on a forced outage. With more options for finding a source of substitute capacity, it will be less burdensome for the resource to arrange for substitution. For these various reasons, some stakeholders support or do not oppose the CAISO proposal.

The CAISO also believes this proposal will add beneficial transparency and equity to the RA procurement process by lowering artificial barriers for a local resource to transact with a load serving entity outside of its local area or a load serving entity in its local area that already has met its local capacity obligations. Under the current rules, nothing prevents a resource in the local area of LSE1 from selling its capacity as system capacity to LSE2, which is not in the same local area. However, the current rules pose a significant disincentive to doing so because the supplier must substitute with another local resource if an outage occurs. This makes it costlier for that local resource to engage in such a transaction; a transaction that would provide increased reliability benefits because it helps meet a local reliability need. Procurement of this nature might also mitigate any potential collective deficiencies in a local capacity area because it will result in more capacity being procured in the local area. Thus, from a reliability perspective, not just an equity perspective, it is important not to disincentivize these types of transactions.⁵⁷ Under the CAISO's proposal, the supplier no longer would face such disincentives to sell its local capacity to load serving entities as system capacity. Where the supplier bears the costs of substituting with another local resource if an outage occurs, it will only do so because it is Listed Local, and has clearly transacted with a load serving entity to hold such a responsibility.

Several stakeholders oppose the CAISO's proposal. First, some stakeholders claim that breaking out system and local capacity does not recognize that a contract between a load serving entity and a supplier may state

⁵⁷ Under the existing RA framework, local capacity requirements are established on a TAC-Area basis, not a local area basis. This means that a load serving entity can satisfy its local RA requirements by procuring sufficient local capacity located in any local capacity area within the larger TAC Area. This can result in a situation where all load serving entities in a TAC Area meet their local RA requirements (*i.e.*, there is no local RA deficiency), but there remain deficiencies in specific local capacity areas because load serving entities are not required to procure capacity in specific local capacity areas (*i.e.*, a collective deficiency). Under section 43A.2.2 of the tariff, if there is a collective deficiency after submission of the annual RA plans, the CAISO is authorized to procure backstop capacity under its CPM to remedy a collective deficiency in a local capacity area. After a LSE has satisfied its local capacity requirements, procuring capacity located in a local capacity area as system capacity potentially might eliminate a collective deficiency in a local capacity area.

that the utility has procured all attributes of the unit's physical capability. This "bundling" does not require rejection of the proposal or preclude the breaking out of system and local capacity in a RA plan. Where a power purchase agreement reflects that a load serving entity has procured all of the RA attributes of a unit, there should be no question that the load serving entity can separately reflect all such attributes in its RA showings because the RA showing would merely reflect the existing contractual arrangement. If there were some reason this were not the case, then similar questions would have arisen several years ago when the CAISO first adopted, and the Commission approved, RA flexible capacity requirements for load serving entities. The CAISO is unaware of any systemic issues arising regarding existing procurement contracts when it implemented flexible RA. Similarly, the CAISO anticipates no such issues with implementing this proposal.

Some stakeholders argue that the proposal will add unnecessary complexity to the RA process and create confusion. Through development of the tariff language and other activities after the CAISO Board approved this proposal, the CAISO has worked diligently to ensure that the new procedures are straightforward and well understood. After submitting this filing, the CAISO will continue to work with stakeholders through its pre-deployment market simulation to ensure there is no confusion about the new rules.

Finally, the stakeholders opposing the CAISO's proposal argue that it will increase costs – or alternatively reduce reliability – because it could result in the CAISO's increased use of its Exceptional Dispatch CPM authority. Other than potentially notifying the applicable local regulatory authority if the phase 2 analysis indicates that a load serving entity fails to show sufficient Listed Local Capacity in its RA plan, the CAISO proposal imposes no other specific consequences on the load serving entity. Further, the CAISO will continue to evaluate local capacity deficiencies in annual and monthly RA plans as it always has under its tariff and is not changing the CPM provisions. The CAISO's proposal does not – and cannot – result in the increased use of CPM for local capacity deficiencies in annual and monthly RA showings. Stated differently, the proposal does not authorize the CAISO to procure CPM capacity to address a deficiency in Listed Local capacity. If the proposal results in load serving entities procuring local resources as system capacity, such incremental procurement of local capacity could reduce the likelihood of the CAISO needing to exercise its CPM authority to address collective local deficiencies, or the CAISO's need to rely on Exceptional Dispatch to meet local reliability needs while such resources are in-service.

It is possible that the proposal could cause some additional intra-monthly Exceptional Dispatches if local resources that are not Listed Local go on forced outage and substitute system capacity located outside of the local capacity area for the capacity located inside of the local area. To a degree this risk can be viewed as a trade-off of remedying the inequitable status quo. Further, notifying

the local regulatory authority of a deficiency under the phase 2 analysis will inform the local regulator that its jurisdictional utilities are taking actions that might impose CPM costs on ratepayers (*i.e.*, not procuring sufficient local capacity with a local substitution requirement to meet its local procurement obligation). The local regulatory authority can then take action as it sees fit. If load serving entities wish to mitigate any potential risks for CAISO backstop procurement, they may ensure that the resources in local capacity areas they procure are shown on RA plans as Listed Local Capacity with a local-for-local substitution obligation. This will mitigate reliability concerns and be more equitable than the existing framework because substitution requirements will mirror the category of the procured capacity.

The potential allocation of CPM procurement costs also addresses the concern raised by some parties that a load serving entity might be incentivized not to show any of its local capacity as Listed Local capacity. Nothing in the CAISO proposal explicitly forbids such action. However, if a load serving entity were to do that to save on RA procurement costs, it would risk being allocated significant CPM costs.

Finally, the CAISO was clear with stakeholders that if the Listed Local policy unexpectedly leads to increased costs or otherwise is not functioning as intended, then the CAISO will utilize the information collected from the Phase 2 analyses to consider and develop additional measures to address Listed Local deficiencies in a future stakeholder initiative.

2. The CAISO Proposes to Streamline Resource Adequacy Showing Requirements for Small Load Serving Utilities

The CAISO tariff requires scheduling coordinators representing load serving entities to submit annual and monthly RA plans.⁵⁸ Scheduling coordinators submit these plans to the CAISO electronically through the customer interface for resource adequacy (CIRA) portal. The tariff requires that the plans be submitted by the deadline established in the Business Practice Manual. Late RA plan submissions are subject to a generally applicable \$500 per day penalty for “all information that is required to be submitted to the CAISO under the CAISO Tariff [and is not] submitted by the specified deadline.”⁵⁹ The CAISO tariff exempts small load serving entities from all of the RA tariff provisions if their metered peak demand did not exceed one MW in the prior year.⁶⁰ This exemption means that such load serving entities need not submit RA plans (and cannot face penalties for late or missing RA showings) and will not

⁵⁸ CAISO tariff, section 40.2.2.4.

⁵⁹ CAISO tariff, section 37.6.1.1.

⁶⁰ CAISO tariff, section 40.1.

face a pro-rata allocation of CPM procurement costs for any backstop capacity procurement associated with RA deficiencies.

The Commission has previously addressed applying late reporting penalties for smaller load serving entities.⁶¹ In those instances, two small utilities that did not meet the one MW exemption appealed their late RA plan penalties arguing that the penalties have a disparate impact on small utilities. Although the Commission upheld the CAISO's imposition of penalties in those cases, it encouraged the CAISO in its reliability services initiative to consider mechanisms to address the potential for disparate treatment of different sized utilities.⁶² The Commission stated that the CAISO might consider "capping reliability related sanctions relative to the size of the utility or developing procedures that improve its timeliness in verifying information submission."⁶³

To address the concerns of small load serving entities, the CAISO proposes to expand the existing RA reporting exemptions for small load serving entities. These revisions follow the guidance provided by the Commission in its orders.

The first change the CAISO proposes is that if a load serving entity has a system, flexible, or local RA obligation below 1 MW for some months of the year, but 1 MW or above in other months, then the load serving entity would not be required to submit a monthly RA plan for the month for the specific RA category type for which it holds an obligation below 1 MW.⁶⁴ If the load serving entity has no obligation to make an RA showing in a particular month, then it would face no late submission penalties in that month because it has no obligation to submit an RA plan.⁶⁵ As an example of how this rule would function, if a load serving entity has a 1.5 MW system obligation in a month and a .8 MW flexible obligation, it would have to submit an RA plan for its system obligation but not its flexible capacity obligation.

⁶¹ *Eastside Power Authority*, 153 FERC ¶ 61,226, P28 (2015) ("Eastside"); *Rancho Cucamonga Municipal Utility*, 153 FERC ¶ 61,225, P 32 (2015) ("Rancho Cucamonga").

⁶² *Id.*

⁶³ *Id.*

⁶⁴ CAISO tariff, proposed section 40.2.2.4(b) ("A Load Serving Entity is not obligated to commit a type of RA capacity on a monthly Resource Adequacy Plan if it holds a monthly obligation of less than 1 MW for that type of RA capacity but . . . is not exempt for any relevant cost allocation from a CPM designation made pursuant to Section 43A associated with a monthly RA capacity obligation of less than 1 MW.").

⁶⁵ Even though the load serving entity would have no RA showing obligation for that month, it still has a procurement obligation – as it does today – and potentially could be allocated CPM costs if there is a CPM designation for an RA deficiency.

The second change the CAISO proposes is that a load serving entity whose flexible or local RA requirement is less than one MW for all 12 months of the RA compliance year will have no RA requirement during the year for the specific category of RA that is below one MW in all 12 months; the obligation essentially will be rounded down to zero for all months.⁶⁶ Under the change described in the previous paragraph, such load serving entities already would be exempt from making any monthly showings on the RA product for which the obligation was calculated at less than one MW. By rounding the obligation down to zero across 12 months, such load serving entities also would face no exposure to CPM cost allocation, nor would they be obligated to submit an annual RA plan regarding that RA product. This treatment matches the existing exemption in section 40.1 for load serving entities with less than one MW of metered peak demand and expands it beyond generic RA to encompass cases where the flexible or local RA requirement is below one MW for the entire year but other categories may be greater than one MW. This would apply, for example, where a load serving entity with a peak load well over 1 MW serves a negligible amount (*i.e.*, below 1 MW in every month) of that load in a local area.

During the stakeholder process, one stakeholder suggested that instead of pursuing the aforementioned tariff revisions the CAISO should scale RA reporting penalties based on the size of the utility whose RA plan is late. The CAISO considered the suggestion but concluded that it was not practical. Among other reasons, creating an appropriate methodology to scale penalties became overly complex in light of the corresponding benefits and also raised larger policy questions on application of other aspects of the penalties in section 37 of the CAISO tariff. Instead, the CAISO opted to expand the exemptions from RA reporting requirements to reduce (or eliminate) the burden on small load serving entities. The CAISO's proposed tariff change alters the responsibility for a small load serving entity to submit a RA plan, rather than altering the penalty structure for when a utility (whether it is large or small) fails to submit a plan timely. The CAISO notes that either approach follows the Commission's prior guidance. Specifically, in its orders, the Commission:

encourag[ed] CAISO, in its reliability services initiative, to consider mechanisms to address the potential for disparate treatment for different sized utilities. For example, CAISO may consider capping reliability related sanctions relative to the size of the utility or

⁶⁶ CAISO tariff, proposed sections 40.3.2(a) ("If the CAISO determines that a Load Serving Entity would have an obligation to show Local Capacity Area Resources of less than 1 MW in a particular TAC Area, then the Load Serving Entity will have an obligation of zero (0) MWs for that TAC Area in that year.") & 43A.8.8(e) ("a Load Serving Entity will not be allocated any costs under this section 43A.8.8 if that Load Serving Entity's contribution to the three-hour net load ramp is less than 1 MW in all 12 months of the calendar year in which the Flexible Capacity CPM occurs.").

developing procedures that improve its timelines in verifying information submissions.⁶⁷

The CAISO's approach follows the Commission's guidance because it will reduce or eliminate small load serving entities' exposure to late RA plan reporting penalties. CAISO also has begun publishing market notices several days before RA plan and supply plan submission deadlines, offering market participants a courtesy reminder of the upcoming deadline with an admonition of the penalties for late submissions.⁶⁸ Once the deadline passes, the CAISO then provides an additional courtesy notice to load serving entities that failed to submit a timely RA plan. Together, the proposed tariff revisions and actions the CAISO has taken to facilitate the timely submission of RA plans effectively respond to the guidance the Commission provided.

Finally, the CAISO proposes one minor "clean-up" revision to section 40.1 arising from the Reliability Services Phase 1A filing. The existing exemption from section 40 for load serving entities with less than one MW of metered peak demand is defined with reference to a deadline in section 40.1.1. Specifically, the exemption applies "if the metered peak Demand of the Load Serving Entity did not exceed one (1) MW during the twelve months preceding the last date on which the Load Serving Entity can make the election in Section 40.1.1 for the next Resource Adequacy Compliance Year." However, the CAISO deleted section 40.1.1 as part of the RSI 1A filing because that initiative eliminated the distinction between Reserve Sharing and Modified Reserve Sharing LSEs. Section 40.1.1 stated: "On an annual basis, in the manner and schedule set forth in the Business Practice Manual, the Scheduling Coordinator for a Load Serving Entity, not exempt under Section 40.1, shall inform the CAISO whether each such LSE elects to be either: (i) a Reserve Sharing LSE or (ii) a Modified Reserve Sharing LSE." Before section 40.1.1 was removed, the Business Practice Manual provided an annual election deadline of September 20. To remain broadly consistent with prior practice but provide evaluation periods based on complete calendar months, the CAISO proposes to amend the existing exemption to apply to load serving entities whose metered peak demand "did not exceed one (1) MW during the twelve months preceding October 1 of the year preceding the Resource Adequacy Compliance Year in question."

⁶⁷ *Eastside* at P 28; *Rancho Cucamonga* at P 32.

⁶⁸ An example of the market notice can be found at: <http://www.caiso.com/Documents/ReminderOctober2017MonthlyResourceAdequacy-SupplyPlansDue081717.html>.

III. STAKEHOLDER PROCESS

The CAISO conducted extensive policy development and tariff drafting stakeholder processes preceding this filing.

The CAISO described the extent of the policy stakeholder process for the Phase 1B amendments in the CAISO's Phase 1A Filing.⁶⁹ That process, lasting more than a year, included six policy papers, nine policy development meetings, and four working group meetings. The tariff stakeholder process for Phase 1A began in January 2016 with publication of draft tariff language and a matrix providing guidance on the impacted tariff sections.⁷⁰ This was followed by two stakeholder meetings in January 2016 and March 2016 to discuss subsequent drafts. Stakeholder review of the draft tariff on Phase 1A was completed by late March 2016.

The RSI2 policy stakeholder process began in June 2015 with the CAISO posting an issue paper.⁷¹ Over the next 15 months, the CAISO held seven meetings and published seven additional stakeholder papers, leading to approval by the CAISO Board on October 27, 2016. The CAISO began the tariff stakeholder process for Phase 2 in February 2017. By the time the Phase 2 tariff stakeholder process began, it became clear to the CAISO it would file and implement the Phase 1B and Phase 2 amendments together. The Phase 2 tariff process began with the CAISO consolidating the Phase 1A amendments, whose stakeholdering had been completed in March. The CAISO held three stakeholder meetings and posted four separate drafts of the combined Phase 1B/Phase 2 tariff language, with the final draft posted in August 2017. While the tariff stakeholder process was unfolding, the CAISO also held a technical working group meeting in June 2017 to provide stakeholders more detailed explanation of how the draft tariff provisions would function.

The CAISO has discussed stakeholder positions on the aspects of the proposal in conjunction with its explanation of each proposal.

IV. EFFECTIVE DATE AND REQUEST FOR WAIVER

The CAISO respectfully requests that the Commission issue an order by December 15, 2017, accepting the tariff revisions in this filing effective February 15, 2018.

⁶⁹ Phase 1A Filing, at 10-11.

⁷⁰ Details of the stakeholder process for Phase 1A and Phase 2 are available on the CAISO website at: <https://www.caiso.com/informed/Pages/StakeholderProcesses/ReliabilityServices.aspx>.

⁷¹ That initial issue paper addressed both Phase 2 and the Flexible Resource Adequacy Criteria and Must Offer Obligations Initiative – Phase 2. The initiatives were separate in all subsequent policy papers.

The CAISO will apply the proposed tariff modifications beginning with the April 2018 RA month. The CAISO requests the February 15 effective date, rather than April 1, because the revised provisions mostly apply to the submission of the monthly RA plans and supply plans, and the CAISO's review and validation of those plans. These processes all occur before the start of the RA month. In that regard, the April 2018 monthly RA plans are due February 15, 2018, which is why the CAISO has requested that effective date. Between February 15 and April 1, the CAISO will continue to conduct some of the RA processes for the February and March RA months under the prior tariff rules. This mostly includes provisions related to assessing RAIM and evaluating outages on RA capacity for substitution and replacement obligations. The "grandfathered" tariff rules are included in Appendix AA of the CAISO tariff and also have a proposed effective date of February 15, 2018. These provisions will apply to any aspect of the RA process for the February and March RA months that have not yet occurred by February 15, 2018.

The six individual elements of this filing are severable and not substantively interdependent. However, the software code the CAISO has developed intertwines the RSI 1B and RSI 2 elements from an implementation perspective. The software is not designed to make the elements separately configurable. Contrary actions on one element of this filing likely would delay implementation of the other elements beyond the planned software implementation date.⁷² The interconnectedness of the software elements is what leads the CAISO to request an order two months before the requested effective date.

Under Section 35.11 of the Commission's regulations, 18 C.F.R. §35.11, the CAISO also requests a waiver of Section 35.3 of the Commission's regulations, 18 C.F.R. §35.3, to allow the proposed tariff provisions to go into effect over 120 days after this tariff amendment filing. Good cause exists for both the waiver and issuance of a Commission order by December 15, 2017. Implementation of the numerous revised resource adequacy and outage requirements proposed will require substantial systems and process changes. The CAISO and market participants need adequate time to design, develop, implement, and test these systems and processes. Therefore, granting the requested waiver is appropriate.

⁷² The CAISO intends to deploy the software on February 13, 2018, two days before the start of the RA process to which it corresponds.

V. COMMUNICATIONS

Under Rule 203(b)(3) of the Commission's Rules of Practice and Procedure,⁷³ the CAISO requests that all correspondence, pleadings, and other communications concerning this filing be served upon:

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VI. SERVICE

The CAISO has served copies of this filing on the California Public Utilities Commission, the California Energy Commission, and all parties with Scheduling Coordinator Agreements under the CAISO tariff. In addition, the CAISO has posted a copy of the filing on the CAISO website.

VII. CONTENTS OF FILING

Besides this transmittal letter, this filing includes these attachments:

- Attachment A – Clean CAISO tariff sheets incorporating this tariff amendment;
- Attachment B – Red-lined document showing the revisions in this tariff amendment;
- Attachment C – CAISO Board of Governors Memo on RSI Phase 1; and
- Attachment D – CAISO Board of Governors Memo on RSI Phase 2,

⁷³ 18 C.F.R. § 385.203(b)(3).

VIII. CONCLUSION

The CAISO respectfully requests that the Commission issue an order by December 15, 2017, accepting the tariff changes proposed in this filing to be effective February 15, 2018.

Respectfully submitted,

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Attachment A – Clean Tariff Records
Reliability Services Phase 1B and Phase 2 Tariff Amendment
California Independent System Operator Corporation

9.3.1 CAISO Outage Coordination Functions

* * * *

9.3.1.3 Coordinating Outages of RA Resources

In performing outage coordination management under Section 9, and this Section 9.3.1.3, the CAISO may take into consideration the status of a Generating Unit as a Resource Adequacy Resource, including whether it is Listed Local RA Capacity. The CAISO may deny, reschedule or cancel an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid or Generating Units of Participating Generators if it determines that the outage is likely to have a detrimental effect on the availability of Resource Adequacy Capacity or the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

9.3.1.3.1 [Not Used]

9.3.1.3.2 [Not Used]

9.3.1.3.3 Substitution Opportunity for RA Resources

To the extent that a resource is committed to provide Resource Adequacy Capacity during a month, the Scheduling Coordinator for the resource may request an RA Maintenance Outage With Substitution, RA Maintenance Outage Without Substitution, Off Peak Opportunity RA Maintenance Outage, or Short-Notice Opportunity RA Outage, or may request to reschedule an Approved Maintenance Outage, for that Resource Adequacy Capacity in accordance with the provisions of this Section. The timelines set forth in this Section for submitting an Outage request and classifying the outage as a Maintenance Outage or a Forced Outage exclude the day that the request is submitted and the day that the outage is scheduled to commence.

9.3.1.3.3.1 RA Maintenance Outage With Substitution

- (a) **Substitution Option.** The Scheduling Coordinator of a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a planned Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage With Substitution during that month.
- (b) **Request.** A request for an RA Maintenance Outage With Substitution must: (i) be submitted to the CAISO no less than eight (8) days prior to the start of the outage; (ii) provide RA Substitution

Capacity in an amount no less than the amount of Resource Adequacy Capacity that would be on scheduled outage; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an RA Maintenance Outage With Substitution in the order that the requests are received.

(2) The CAISO may approve the request for an RA Maintenance Outage With Substitution if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.1(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the request was submitted no less than eight (8) days prior to the start date for the outage, and it meets the requirements in Section 9.3.1.3.3.1(c)(2) the CAISO may approve the request as an RA Maintenance Outage With Substitution.

(4) If the CAISO denies the request for failing to meet the requirements in Section 9.3.1.3.3.1(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request a different schedule for the RA Maintenance Outage With Substitution or may request that the CAISO accommodate the outage without RA Substitute Capacity at another time.

(d) **Resource Adequacy Obligation.** The RA Substitute Capacity for an RA Maintenance Outage With Substitution approved under Section 9.3.1.3.3.1(c)(3) shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAAIM provisions in Section 40.9, for the MW amount and duration of the outage substitution period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.3.2 RA Maintenance Outage Without Substitution

(a) **Option for No Substitution.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request

that a Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage Without Substitution, without a requirement to provide RA Substitute Capacity for the unavailable capacity for the duration of the outage to be excluded from the RAIM calculation under Section 40.9.

(b) **Request.** A request for an RA Maintenance Outage Without Substitution must: (i) be submitted to the CAISO no less than eight (8) days prior to the start date of the outage; and (ii) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider requests received for an RA Maintenance Outage Without Substitution in the order the requests were received.

(2) The CAISO may approve a request for an RA Maintenance Outage Without Substitution if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.2(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The analysis of system conditions and the overall outage schedule will include Approved Maintenance Outage requests that were received before and after the request for an RA Maintenance Outage Without Substitution.

(3) The CAISO will not approve a request for an RA Maintenance Outage Without Substitution earlier than seven days before the first day of the resource adequacy month, and may hold the request as pending until system conditions are sufficiently known for the CAISO to determine whether the outage meets the requirements in Section 9.3.1.3.3.2(c)(2).

(4) If the CAISO denies a request for an RA Maintenance Outage Without Substitution for failing to meet the requirements in Section 9.3.1.3.3.2(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage With Substitution or may request that the CAISO accommodate the outage at another time.

9.3.1.3.3.3 Off-Peak Opportunity RA Maintenance Outage

- (a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA Substitute Capacity for the unavailable capacity for the duration of the outage to be excluded from the RAAIM calculation under Section 40.9.
- (b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must: (i) be submitted to the CAISO no less than eight (8) days prior to the start date for the outage; (ii) schedule the outage to begin during off-peak hours (as specified in the Business Practice Manuals) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manuals) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manuals) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday; and (iii) otherwise comply with the requirements set forth in Section 9.
- (c) **Approval.**
 - (1) The CAISO will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.
 - (2) If the request was submitted no less than eight (8) days prior to the start date for the outage, the CAISO may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that: (i) the request meets the requirements set forth in Section 9.3.1.3.3.3(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.
 - (3) If the CAISO denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.3.3(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage With Substitution or may request that the CAISO accommodate the outage at another time.
 - (4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not

completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

9.3.1.3.3.4 Short-Notice Opportunity RA Outage

- (a) **Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage to be excluded from the RAAIM calculation under Section 40.9.
- (b) A Short-Notice Opportunity RA Outage shall not exceed five days in length. The request for a Short-Notice Opportunity RA Outage must: (i) be submitted no more than seven (7) days prior to the requested start date for the outage; (ii) provide the CAISO adequate time to analyze the request before the outage begins; (iii) be submitted before the outage has commenced as a Forced Outage; and (iv) otherwise comply with the requirements of Section 9.
- (c) **Approval.**
 - (1) The CAISO will consider Short-Notice Opportunity RA Outages in the order the requests are received.
 - (2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO may approve the request as a Short Notice Opportunity RA Outage if it determines that: (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will not be subject to the RAAIM provisions in Section 40.9.
 - (3) If the request was submitted three days or less prior to the start date of the outage, the

CAISO may approve the request as a Forced Outage if it determines that: (i) the outage and request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period; and (iv) the repairs are necessary to maintain system or resource reliability and require immediate attention to prevent equipment damage or failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage and will not be subject to the RAIM provisions in Section 40.9.

- (4) To the extent that an approved Short-Notice Opportunity RA Outage is not completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the RAIM provisions in Section 40.9.

9.3.1.3.4 Outage Reporting for Resource Adequacy Resources between 1 MW and 10 MW

Scheduling Coordinators or Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10 shall report Outages in accordance with the process set forth in the Business Practice Manual.

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40.1 Applicability

A Load Serving Entity, and its Scheduling Coordinator, shall be exempt from this Section 40 during the next Resource Adequacy Compliance Year, if the metered peak Demand of the Load Serving Entity did not exceed one (1) MW during the twelve months preceding October 1 of the year preceding the Resource Adequacy Compliance Year in question. This Section 40 shall apply to all other Load Serving

Entities and their respective Scheduling Coordinators. For purposes of Section 40, a Load Serving Entity shall not include any entity satisfying the terms of California Public Utilities Code Section 380(j)(3).

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40.2.1 Requirements for CPUC Load Serving Entities

- (a) The Scheduling Coordinator for a CPUC Load Serving Entity must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, except that the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no less than 45 days in advance of the first day of the month covered by the plan, as provided in Section 40.2.1.1(e).
- (b) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1(b) shall apply.
- (c) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity, then the provisions of Section 40.8 shall apply.
- (d) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Demand Forecast requirements, then the provisions of Section 40.2.2.3 shall apply.
- (e) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Resource Adequacy Plan requirements that include, at a minimum, identifying Local Capacity Area Resources and Listed Local RA Capacity, or where there is a requirement to submit monthly Resource Adequacy Plans but the submission date is less than 45 days in advance of the

first day of the month covered by the plan, then Section 40.2.2.4 shall apply.

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40.2.2 Non-CPUC Load Serving Entities

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40.2.2.3 Demand Forecasts

If the California Energy Commission does not produce a coincident peak Demand Forecast for a Load Serving Entity, the Scheduling Coordinator for that Load Serving Entity must provide the information requested by the CAISO on the schedule and in the reporting format(s) set forth in the Business Practice Manual.

40.2.2.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity, as follows:

- (a) Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity as described in Section 40.3, and may identify a Local Capacity Area Resource as Listed Local RA Capacity.
- (b) Each monthly Resource Adequacy Plan or the same information as required to be included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual. The monthly Resource Adequacy Plan must identify all resources, including Local Capacity Area Resources, the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving Entity as determined by

the Demand Forecasts developed in accordance with Section 40.2.2.3 and applicable Reserve Margin. For each Local Capacity Area Resource identified on the monthly Resource Adequacy Plan, the Load Serving Entity also may identify RA Capacity from such resource as Listed Local RA Capacity. Resource Adequacy Plans must utilize the Net Qualifying Capacity requirements of Section 40.4. A Load Serving Entity is not obligated to commit a type of RA capacity on a monthly Resource Adequacy Plan if it holds a monthly obligation of less than 1 MW for that type of RA capacity but is not exempt from committing any other type of RA capacity for that month for which it holds a monthly obligation of 1 MW or greater and is not exempt for any relevant cost allocation from a CPM designation made pursuant to Section 43A associated with a monthly RA capacity obligation of less than 1 MW.

- (c) The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 30 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct either: (i) a discrepancy between its monthly Resource Adequacy Plan and the monthly Supply Plan of a Resource Adequacy Resource providing that Load Serving Entity with Resource Adequacy Capacity, as provided in Section 40.7(b); or (ii) a deficiency in how much Resource Adequacy Capacity was provided on the monthly Resource Adequacy Plan. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from 30 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.
- (d) The Scheduling Coordinator for the Load Serving Entity that submits a revision to its monthly Resource Adequacy Plan to correct a deficiency or discrepancy must include in the revision a MW amount of Resource Adequacy Capacity for each day of the month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.

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40.3.2 Allocation of Local Capacity Area Resource Obligations

The CAISO will allocate Local Capacity Area Resource requirements to Scheduling Coordinators for Load Serving Entities in the following sequential manner:

- (a) The responsibility for the aggregate Local Capacity Area Resources required for all Local Capacity Areas within each TAC Area as determined by the Local Capacity Technical Study will be allocated to all Scheduling Coordinators for Load Serving Entities that serve Load in the TAC Area in accordance with the Load Serving Entity's proportionate share of the LSE's TAC Area Load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak Demand Forecast for the next Resource Adequacy Compliance Year as determined by the California Energy Commission. Expressed as a formula, the allocation of Local Area Capacity Resource obligations will be as follows: $(\sum \text{Local Capacity Area MW in TAC Area from the Local Capacity Technical Study}) * (\text{LSE Demand in TAC Area at CAISO annual coincident peak Demand}) / (\text{Total TAC Area Demand at the time of CAISO annual coincident peak Demand})$. This will result in a MW responsibility for each Load Serving Entity for each TAC Area in which the LSE serves Load. In no instance, however, is a Load Serving Entity obligated to commit, on a monthly Resource Adequacy Plan, Local Capacity Area Resources in a particular TAC Area in excess of the quantity of capacity needed by that Load Serving Entity to meet its applicable Demand and Reserve Margin requirements for the applicable compliance month. If the CAISO determines that a Load Serving Entity would have an obligation to show Local Capacity Area Resources of less than 1 MW in a particular TAC Area, then the Load Serving Entity will have an obligation of zero (0) MWs for that TAC Area in that year. The LSE may meet its MW responsibility, as assigned under this Section, for each TAC Area in which the LSE serves Load by procurement of that

MW quantity in any Local Capacity Area in the TAC Area.

- (b) For Scheduling Coordinators for Non-CPUC Load Serving Entities, the Local Capacity Area Resource obligation will be allocated based on Section 40.3.2(a) above.
- (c) For Scheduling Coordinators for CPUC Load Serving Entities, the CAISO will allocate the Local Capacity Area Resource obligation based on an allocation methodology, if any, adopted by the CPUC. However, if the allocation methodology adopted by the CPUC does not fully allocate the total sum of each CPUC Load Serving Entity's proportionate share calculated under Section 40.3.2(a), the CAISO will allocate the difference to all Scheduling Coordinators for CPUC Load Serving Entities in accordance with their proportionate share calculated under 40.3.2(a). If the CPUC does not adopt an allocation methodology, the CAISO will allocate Local Capacity Area Resources to Scheduling Coordinators for CPUC Load Serving Entities based on Section 40.3.2(a).

Once the CAISO has allocated the total responsibility for Local Capacity Area Resources, the CAISO will inform the Scheduling Coordinator for each LSE of the LSE's specific allocated responsibility for Local Capacity Area Resources in each TAC Area in which the LSE serves Load.

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40.4.47 Submission of Supply Plans

40.4.7.1 Schedule for Submission of Supply Plans

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with annual and monthly Supply Plans, as follows:

- (a) The annual Supply Plan shall be submitted to the CAISO on the schedule set forth in the Business Practice Manual and shall verify their agreement to provide Resource Adequacy Capacity during the next Resource Adequacy Compliance Year. The annual

Supply Plan may identify a Local Capacity Area Resource as Listed Local RA Capacity.

- (b) The monthly Supply Plans or the same information as required to be included in the monthly Supply Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual, and shall verify their agreement to provide Resource Adequacy Capacity during that resource adequacy month. The monthly Supply Plan may identify a Local Capacity Area Resource as Listed Local RA Capacity.
- (c) The Scheduling Coordinator for the Resource Adequacy Resource may submit, at any time from 45 days through 30 days in advance of the relevant month, a revision to its monthly Supply Plan to correct a discrepancy between its monthly Supply Plan and a Resource Adequacy Plan of a Load Serving Entity for which that Resource Adequacy Resource is providing Resource Adequacy Capacity, as provided in Section 40.7(b). The CAISO will not accept any revisions to a monthly Supply Plan from 30 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource Adequacy Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

* * * *

40.7 Compliance

The CAISO will evaluate Resource Adequacy Plans and Supply Plans as follows:

- (a) The CAISO will evaluate whether each annual and monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates Resource Adequacy Capacity sufficient to satisfy the Load Serving Entity's (i) allocated responsibility for Local Capacity Area Resources under Section 40.3.2 and (ii) applicable Demand and Reserve Margin requirements. The CAISO will evaluate compliance with

the responsibility for demonstrating Local Capacity Area Resources in two phases. Phase 1 of the Local Capacity Area Resource sufficiency evaluation will be made without regard to capacity's identification as Listed Local RA Capacity. Phase 2 of the Local Capacity Area Resource sufficiency evaluation will consider capacity to be a Local Capacity Area Resource only if it is also Listed Local RA Capacity. If the CAISO determines through the Phase 1 analysis that a Resource Adequacy Plan does not demonstrate Local Capacity Area Resources sufficient to meet its allocated responsibility under Section 40.3.2, compliance with applicable Demand and Reserve Margin requirements, or compliance with any other resource adequacy requirement in this Section 40 or adopted by the CPUC, Local Regulatory Authority, or federal agency, as applicable, then the CAISO will notify the relevant Scheduling Coordinator, CPUC, Local Regulatory Authority, or federal agency with jurisdiction over the relevant Load Serving Entity, or in the case of a discrepancy between Resource Adequacy Plan(s) and Supply Plan(s), the relevant Scheduling Coordinators, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual. The notification will be made at least 40 days in advance of the first day of the month covered by the plan and will include the reasons the CAISO believes a deficiency exists. If the deficiency relates to the demonstration of Local Capacity Area Resources in a Load Serving Entity's annual Resource Adequacy Plan, and the CAISO does not provide a written notice of resolution of the deficiency as set forth in the Business Practice Manual, the Scheduling Coordinator for the Load Serving Entity may demonstrate that the identified deficiency is cured by submitting a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year. For all other identified deficiencies, other than an insufficiency identified through Phase 2 of the Local Capacity Area Resource sufficiency evaluation, at least 30 days prior to the effective month of the relevant Resource Adequacy Plan, the Scheduling Coordinator for the Load Serving Entity shall: (i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan; or (ii) advise the CAISO that the CPUC,

Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists. If, after providing any needed opportunity to resolve identified discrepancies as required by Section 40.7(b), the CAISO identifies an insufficiency through Phase 2 of the Local Capacity Area Resource sufficiency evaluation, then the CAISO may notify the relevant Local Regulatory Authority of the insufficiency.

- (b) In the case of a discrepancy between Resource Adequacy Plan(s) and Supply Plan(s), if resolved, the relevant Scheduling Coordinator(s) must provide the CAISO with revised Resource Adequacy Plan(s) or Supply Plans, as applicable, at least 30 days prior to the effective month. If the CAISO is not advised that the deficiency or discrepancy is resolved at least 30 days prior to the effective month, the CAISO will use the information contained in the Supply Plan to set the obligations of Resource Adequacy Resources under this Section 40 and/or to assign any costs incurred under this Section 40 and Section 43A.

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40.9.3 Availability Assessment

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40.9.3.4 Treatment of Outages

- (a) **RA Substitute Capacity Not Required.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity on an Outage during the Resource Adequacy month that does not require RA Substitution Capacity under Section 9.3.1.3.3.
- (b) **RA Substitute Capacity Required and Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges –
 - (1) the RAAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on outage to the extent the

resource provides RA Substitute Capacity for that outage as required under Section 40.9.3.6; and

- (2) the RAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity commitment. For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement. For the purposes of this Section 40.9, base ramping resources (as defined in section 40.10.3.2) are considered to be a higher quality of Flexible Capacity Category than either peak ramping resources (as defined in section 40.10.3.3) or super-peak ramping resources (as defined in section 40.10.3.4). Additionally, peak ramping resources (as defined in section 40.10.3.3) are considered to be a higher quality of Flexible Capacity Category than super-peak ramping resources (as defined in section 40.10.3.4).
- (c) **RA Substitute Capacity Required not Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAIM charges, the RAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an outage to the extent the resource does not provide RA Substitute Capacity for the outage as required under Section 40.9.3.6.
- (d) **Exclusions from RAIM for certain Forced Outage types.** The RAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.
- (e) **Derates on Generating Units Providing system RA Capacity and Listed Local RA Capacity.** If a Generating Unit providing both system RA Capacity and Listed Local RA Capacity is on Forced Outage, then for purposes of RAIM and RA Substitute Capacity the quantity of the

Forced Outage will be apportioned first to the system RA Capacity provided from that Generating Unit. If the quantity of the Forced Outage exceeds the quantity of system RA Capacity provided by the Generating Unit, then the remainder of the Forced Outage shall be apportioned to the Listed Local RA Capacity provided by the Generating Unit.

40.9.3.5 [Not Used]

40.9.3.6 Substitute Capacity

40.9.3.6.1 CAISO Evaluation by T-22 of Need for Substitute Capacity for Outages Submitted by T-25

No later than 22 days before the start of each month, the CAISO will determine for each day in that month whether it will have sufficient operationally available RA Capacity from a combination of Local Capacity Area Resources and system capacity resources to meet or exceed the CAISO system RA Reliability Margin for each day. The CAISO will base this assessment on Maintenance Outages planned to be taken during the month that were submitted at least 25 days before the start of the month and any RA Substitute Capacity already provided to the CAISO for that month.

If the CAISO determines that it will have sufficient operationally available RA Capacity to meet or exceed the CAISO system RA Reliability Margin for a particular day, then no supplier with an outage submitted at least 25 days before the start of the month would be required to provide RA Substitute Capacity to be excluded from the RAAIM calculation as part of the analysis conducted no later than 22 days before the start of each month.

If the CAISO determines that it will not have sufficient operationally available RA capacity to meet the CAISO system RA Reliability Margin for a particular day, then it will determine which resources must provide RA Substitute Capacity to be excluded from the RAAIM calculation based on the reverse order of the dates on which the resources submitted the outage requests to the CAISO. The CAISO will first request the resource providing RA Capacity with the most-recently-requested outage for that day to provide RA Substitute Capacity and then will continue to assign substitution opportunities until the CAISO has sufficient operationally available RA Capacity to meet the CAISO system RA Reliability Margin for that particular day, assuming that all resources that are assigned a RA Substitute Capacity obligation actually provide RA Substitute Capacity for that day.

For purposes of this section 40.9.3.6.1, the CAISO will treat any request to extend the scheduled duration of an outage or increase the MW amount of capacity on outage as a new outage request and will assign a new priority date based on when the request to change the outage or derate was submitted to the CAISO.

For the purposes of this section 40.9.3.6.1, the CAISO will not assign a new priority date where the Scheduling Coordinator requests to reduce the scheduled duration of an outage or decrease the MW amount of capacity on outage.

A resource designated to provide RA Substitute Capacity as part of the analysis conducted no later than 22 days before the start of each month must designate RA Substitute Capacity by the deadline specified in the relevant Business Practice Manual. Failure to designate the RA Substitute Capacity by the specified deadline will subject the resource to RAIM unless the outage is cancelled or rescheduled.

40.3.6.2 CAISO Rolling Evaluation of Need for Substitute Capacity for Outages Submitted after T-25

Starting at twenty-four days before the start of a month, the CAISO will consider submitted Maintenance Outages for a substitution requirement on a rolling basis, based on time of submission. Upon submission of the outage request, the CAISO will determine for each day of the outage whether the CAISO will have sufficient operationally available RA Capacity from a combination of Local Capacity Area Resources and system capacity resources to meet or exceed the CAISO system RA Reliability Margin for each day. The CAISO will base this assessment on Maintenance Outages planned to be taken for that day and any RA Substitute Capacity already provided to the CAISO for that day.

If the CAISO determines that it will have sufficient operationally available RA Capacity to meet or exceed the CAISO system RA Reliability Margin for a particular day, then the supplier will not be required to provide RA Substitute Capacity for that day to avoid imposition of RAIM.

If the CAISO determines that it will not have sufficient operationally available RA capacity to meet the CAISO system RA Reliability Margin for a particular day, then it will request substitution for the resource for that day. Failure to designate RA Substitute Capacity by the deadline specified in the relevant Business Practice Manual will subject the resource to RAIM unless the outage is cancelled or rescheduled.

The CAISO will not conduct an assessment to determine the need to provide RA Substitute Capacity for

Forced Outages. Any such outage, irrespective of whether the resource is providing RA Capacity or Flexible RA Capacity, will be subject to applicable RAAIM unless the Scheduling Coordinator for the resource provides Substitute Capacity by the deadline specified in the relevant Business Practice Manual, the outage is exempt from RAAIM as set forth in Section 9 or Section 40, the outage is cancelled, or the outage is rescheduled.

For purposes of this section 40.9.3.6.2, the CAISO will treat any request to extend the scheduled duration of an outage or increase the MW amount of capacity on outage as a new outage request and will assign a new priority date based on when the request to change the outage or derate was submitted to the CAISO. For purposes of this section 40.9.3.6.2, the CAISO will reevaluate the need for a Scheduling Coordinator to provide RA Substitute Capacity where the Scheduling Coordinator requests to reduce the scheduled duration of an outage or decrease the MW amount of capacity on outage but will not assign a new priority date.

40.9.3.6.3 General Provisions on Substitute Capacity

(a) Substitution

- (1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on Outage. Certain types of Outages, as defined elsewhere in Section 9 or Section 40, will not subject the Scheduling Coordinator for a Resource Adequacy Resource to RAAIM if it declines to provide RA Substitute Capacity.
- (2) If the Resource Adequacy Resource on Outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) Availability

- (1) RA Substitute Capacity must be operationally available to the CAISO:
- (2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.

- (3) RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.
- (4) RA Substitute Capacity shall not qualify to be RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.
- (5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.6, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.
- (6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

- (1) **Day-Ahead Market.** Requests for substitution for Forced Outages in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution for Forced Outages in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.
- (2) **Real-Time Market.** Requests for substitution for Forced Outages in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

40.9.3.6.4 RA Substitute Capacity From A Single Resource

- (a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on Outage may provide RA Substitute Capacity for that capacity from a single resource.
- (b) **Local Capacity Area Resource Substitution**

(1) **Pre-Qualified Substitution.**

- (A) **Annual Process.** The CAISO annually will conduct a process to assess the eligibility of resources to pre-qualify as RA Substitute Capacity for Local Capacity Resource Adequacy Resources that potentially could be Listed Local RA Capacity in the time period covered by the process. The CAISO will publish a list of the pre-qualified resources in accordance with the timeline in the Business Practice Manual.
- (B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy Resource for which it could substitute.
- (C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on Outage must submit a timely substitution request in accordance with Section 40.9.3.6.3(c).
- (D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.4(b)(1)(C) and 40.9.3.6.3(b).

(2) **Non-Pre-Qualified Substitution.**

- (A) **Day-Ahead Market.** The Scheduling Coordinator for Listed Local RA Capacity on Outage may submit a request to substitute a non-pre-qualified resource only in the Day-Ahead Market.
- (B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Listed Local RA Capacity must submit a timely substitution request in accordance with Section 40.9.3.6.3(c), and the alternate resource must be located in the same Local Capacity Area.
- (C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.4(b)(2)(A) and (B), and 40.9.3.6.3(b).

(c) **Non-Local Capacity Area Resource Substitution**

- (1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for RA Capacity other than Listed Local RA Capacity that has an Outage must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c).
 - (2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.4(c)(1) and 40.9.3.6.3(b).
- (d) **External Resources**
- (1) **Request.** To use a Dynamic System Resource, Non-Dynamic System Resource, NRS-RA Resource, or Pseudo-Tie as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has an Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c).
 - (2) **Approval.** The CAISO will grant the request if the alternate resource is external to the CAISO Balancing Authority Area (including Pseudo-Ties), the Scheduling Coordinator for the resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meets the requirements in Sections 40.9.3.6.4(d)(1) and 40.9.3.6.3(b).
- (e) **Flexible RA Capacity**
- (1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.
 - (2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable requirements in Sections 40.9.3.6.4(e) and 40.9.3.6.3(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the highest quality Flexible Capacity Category for the MWs of the Flexible RA Capacity commitments of the resource on

outage and the alternate resource.

40.9.3.6.5 RA Substitute Capacity From Multiple Resources

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on Outage may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) Local Capacity Area Resource Substitution

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for Listed Local RA Capacity on Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c) if any of the alternate resources are not pre-qualified to substitute for the resource on the outage; however, if all of the alternate resources are pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

(2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.5(b)(1) and 40.9.3.6.3(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity Area as the Resource Adequacy Resource.

(c) Non-Local Capacity Area Resources

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for RA Capacity other than Listed Local RA Capacity on Outage must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if all of the alternate resources meet the requirements in Sections 40.9.3.6.5(c)(1) and 40.9.3.6.3(c).

(d) External Resources

(1) **Request.** To use multiple Dynamic System Resources, Non-Dynamic System Resources, NRS-RA Resources, or Pseudo-Ties as RA Substitute Capacity, the

Scheduling Coordinator for a Resource Adequacy Resource that has an Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c).

- (2) **Approval.** The CAISO will grant the request if the alternate resources are external to the CAISO Balancing Authority Area (including Pseudo-Ties), and the Scheduling Coordinator of each alternate resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meet the requirements in Sections 40.9.3.6.5(d)(1) and 40.9.3.6.3(b).

(e) **Flexible RA Capacity**

- (1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources must be located in the CAISO Balancing Authority Area, which does not include a Pseudo-Tie of a Generating Unit or a Resource-Specific System Resource.
- (2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.3.6.5(e)(1) and 40.9.3.6.3(c).

40.9.3.6.6 Multiple Substitution by One Resource. The Scheduling Coordinator for a resource already providing RA Substitute Capacity may provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on Outage, subject to approval by the CAISO pursuant to Section 40.9.3.6.4 or 40.9.3.6.5.

40.9.3.6.7 Resource Adequacy Obligation. To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40 applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be released from this obligation and the substitution requirements in Section 40.9 -

- (a) at the end of the approved substitution period; or
- (b) upon request by either the Scheduling Coordinator for the resource on Outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in

accordance with the process set forth in the Business Practice Manual.

40.9.3.6.8 Treatment of Unbid Capacity. If the Scheduling Coordinator for RA Substitute Capacity does not submit Bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO --

- (1) will treat the unbid capacity as unavailable for purposes of Section 40.9; and
- (2) will reflect that unavailability in the RAAIM availability calculation for the Resource Adequacy Resource providing the RA Substitute Capacity.

40.9.3.6.9 Substitution Opportunity Information

In order to make information available to Market Participants pertinent to the provisions of this Section 40.9.3.6, the CAISO will:

- (a) Annually post on the CAISO Website the due dates[A1] for each month of the following Resource Adequacy compliance year the various submissions the CAISO requires under the Resource Adequacy program; and
- (b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity that may be needed or available as RA Substitute Capacity in the bilateral market. Use of the bulletin board is voluntary and is for informational purposes only.

* * * *

40.9.4 Availability Assessment

- (a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on --
 - (1) the availability assessment of the resource's minimum daily availability of local and/or system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping Resource Adequacy commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;
 - (2) including the capacity, duration, and must-offer requirement for local and/or system

Resource Adequacy Capacity or Flexible RA Capacity on an Outage, except to the extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6, the Outage is approved by the CAISO without requiring RA Substitute Capacity under other authority of Section 9 or Section 40, or the Forced Outage is excluded from RAAIM under Section 40.9.3.4; and

- (3) including the capacity, duration, and must-offer requirement for any RA Substitute Capacity or CPM Capacity the resource is committed to provide.
- (b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly average availability.
- (c) If the resource is committed to provide local and/or system RA capacity and Flexible RA Capacity in a month, but does not provide both for the full month, the CAISO prorates the number of days that local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

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40.10.5 Flexible RA Capacity Plans

40.10.5.1 LSE Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly LSE Flexible RA Capacity Plans for each Load Serving Entity it represents.
- (b) **Annual Plan.** Each annual LSE Flexible RA Capacity Plan must -
 - (1) demonstrate that the Load Serving Entity has procured for each month at least 90 percent of the annual Flexible RA Capacity requirement determined by the CAISO; or the amount of Flexible RA Capacity required by the Load Serving Entity's Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) identify the resources the Load Serving Entity intends to rely on to provide the Flexible RA Capacity, but need not identify the flexible resource adequacy categories; and

- (3) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (c) **Monthly Plan.** The monthly LSE Flexible RA Capacity Plan must --
- (1) demonstrate that the Load Serving Entity procured 100 percent of the total monthly Flexible RA Capacity requirement determined by the CAISO; or the monthly amount of Flexible RA Capacity required by the Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) demonstrate that the Load Serving Entity met the total monthly requirement determined by the CAISO within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category; or only if the Local Regulatory Authority has established its own flexible capacity requirement, show that the Load Serving Entity has met the total monthly requirement determined by the Local Regulatory Authority within the minimum or maximum quantity for each Flexible Capacity Category required by the Local Regulatory Authority, if applicable;
 - (3) identify all resources the Load Serving Entity will rely on to provide the Flexible RA Capacity and for each resource specify the Flexible Capacity Category in which the Flexible RA Capacity will be provided; and
 - (4) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 30 days in advance of the first day of the month covered by the plan, a revision to its monthly LSE Flexible RA Capacity Plan to correct either: (i) a discrepancy between its monthly LSE Flexible RA Capacity Plan and the monthly Supply Plan of a Resource Adequacy Resource providing that Load Serving Entity with Flexible RA Capacity; or (ii) a deficiency in how much Flexible RA Capacity was provided on the monthly LSE Flexible RA Capacity Plan. The CAISO will not accept any revisions to a monthly LSE Flexible RA Capacity

Plan from 30 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

- (e) **Reporting Exemption.** Notwithstanding the above, a Load Serving Entity is not obligated to submit a monthly LSE Flexible RA Capacity Plan for a given month if the Load Serving Entity's contribution to the three-hour net load ramp is less than 1 MW for that month. Except to the extent allowed under section 43A.8.8(e), such Load Serving Entity is not exempt for any relevant cost allocation from a CPM designation made pursuant to Section 43A associated with a monthly RA capacity obligation of less than 1 MW.

40.10.5.1.1 Load-Following MSS

- (1) Each Load-following MSS Load Serving Entity for which the CAISO has calculated an allocable share of the Flexible Capacity Need under Section 40.10.2.2 must submit annual and monthly LSE Flexible RA Capacity Plans pursuant to this Section 40.10.5.1 to identify the Flexible RA Capacity it is using to satisfy such requirement.
- (2) The Load-following MSS must increase the Flexible RA Capacity in its monthly plan by the MW amount of Capacity for a Variable Energy Resource that is initially shown as being included in the Load-following MSS Load Serving Entity's resource portfolio in the information required pursuant to Section 40.10.1.2, but is subsequently not included in the current MSS resource portfolio at the time the monthly LSE Flexible RA Capacity Plan is due for the applicable month.

40.10.5.2 Resource Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly Resource Flexible RA Capacity Plans for each resource it represents that provides Flexible RA Capacity; except that an annual plan is not required for 2015.
- (b) **Annual Plan.** The annual Resource Flexible RA Capacity Plan shall --
 - (1) verify the resource's agreement to provide Flexible RA Capacity during the next Resource Adequacy Compliance Year; and
 - (2) include all information and be submitted no later than the last Business Day in October, in

accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

- (c) **Monthly Plan.** The monthly Resource Flexible RA Capacity Plan shall --
- (1) verify the resource's agreement to provide Flexible RA Capacity during the month;
 - (2) include an affirmative representation by the Scheduling Coordinator submitting the plan that the CAISO is entitled to rely on the accuracy of the information provided in the plan to perform those functions set forth in this Section 40; and
 - (3) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Resource Adequacy Resource may, at any time from 45 days through 30 days in advance of the relevant month, revise its monthly Flexible RA Capacity Plan to correct a discrepancy between its monthly Flexible RA Capacity Plan and a Resource Adequacy Plan of a Load Serving Entity for which that Resource Adequacy Resource is providing Flexible RA Capacity. The CAISO will not accept any revisions to a monthly Flexible RA Capacity Plan less than 30 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

40.10.5.3 Review of Flexible RA Capacity Plans

- (a) **Validation For Deficiency In An Individual LSE Plan.**
- (1) If the Local Regulatory Authority has not established its own flexible capacity procurement requirements, the CAISO will validate the annual and monthly LSE Flexible RA Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities, and will use the Effective Flexible Capacity value for each resource calculated under Section 40.10.4. The CAISO will determine whether each Load Serving Entity met its annual or monthly total Flexible RA Capacity Requirement, and for the monthly LSE Flexible RA Capacity Plan, whether it met the total monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category.

- (2) If the Local Regulatory Authority has established its own flexible capacity procurement requirements, the CAISO will not validate the individual LSE Flexible Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities.
- (b) **Identification of Discrepancy.** The CAISO will compare all LSE Flexible RA Capacity Plans and Resource Flexible RA Capacity Plans to identify any discrepancy in the Resource Adequacy Resources listed or the amount of the Resource Adequacy Capacity committed.
- (c) **Evaluation For Cumulative Deficiency.**
- (1) The CAISO will evaluate the annual LSE Flexible RA Capacity Plans of all Load Serving Entities on a cumulative basis to determine whether the total amount of Flexible RA Capacity shown in the plans meets 90 percent of the annual Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(a).
- (2) The CAISO will evaluate the monthly Flexible RA Capacity Plans of all Load Serving Entities to determine whether (i) the total amount of Flexible RA Capacity shown in the plans, limited to the maximum monthly requirement for each category, meets the applicable monthly Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(b)(1); or (ii) the total amount of Flexible RA Capacity shown in the base ramping Flexible Capacity Category in the plans meets the minimum monthly requirement for the base ramping Flexible Capacity Category determined by the CAISO pursuant to Section 40.10.1.5 or whether a cumulative deficiency may exist under Section 43.2.7(b)(2).
- (d) **Calculation of Flexible RA Capacity.** The CAISO will calculate the amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans using the MW amount of Flexible RA Capacity for each resource designated in a plan as a Flexible RA Capacity Resource up to the Effective Flexible Capacity value for the resource calculated under Section 40.10.4.
- (e) **Allocated Flexible RA Capacity Requirement.** The CAISO will calculate the Load Serving Entity's allocated annual and monthly Flexible RA Capacity Requirement --
- (1) For Load Serving Entities within a Local Regulatory Authority that has not adopted its

own allocation methodology, the CAISO will calculate the Load Serving Entity's allocated requirement based on the CAISO's allocation methodology set forth in Section 40.10.2.

- (2) For Load Serving Entities within a Local Regulatory Authority that has adopted its own allocation methodology, the CAISO will use that Local Regulatory Authority's methodology for the Local Regulatory Authority's jurisdictional Load Serving Entities.

40.10.5.4 Deficiency in LSE Flexible RA Capacity Plan

- (a) **Finding and Notification.** If the CAISO's validation under Section 40.10.5.3(a) finds either: (i) that the total amount of Flexible RA Capacity included in an annual or monthly LSE Flexible RA Capacity Plan is not sufficient to satisfy the Load Serving Entity's allocated Flexible RA Capacity Requirement; or (ii) that the total monthly requirement in a monthly LSE Flexible RA Capacity Plan was not met within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, the CAISO will --
 - (1) notify the relevant Scheduling Coordinator, and the Local Regulatory Authority or federal agency with jurisdiction over the relevant Load Serving Entity, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and
 - (2) provide the notice at least 40 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a deficiency exists.
- (b) **Resolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall -
 - (1) demonstrate, no less than 30 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan, or
 - (2) advise the CAISO that the Load Serving Entity's Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.
- (c) **Unresolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10

and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.5 Discrepancy Between Flexible RA Capacity Plans.

- (a) **Finding and Notification.** If the CAISO's review under Section 40.10.5.3(b) finds a discrepancy between an LSE Flexible RA Capacity Plan and a Resource Flexible RA Capacity Plan, the CAISO will --
- (1) notify the relevant Scheduling Coordinators of the discrepancy in an attempt to resolve the discrepancy in accordance with the procedures set forth in the Business Practice Manual; and
 - (2) provide the notice at least 40 days in advance of the first day of the month covered by the plans and include the reasons the CAISO believes a discrepancy exists.
- (b) **Resolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and the discrepancy is resolved, the Scheduling Coordinator must provide the CAISO with a revised LSE Flexible RA Capacity Plan or Resource Flexible RA Capacity Plan, as applicable, no less than 30 days prior to the first day of the month covered by the plans.
- (c) **Unresolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and is not advised that the discrepancy is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.6 LRA Deficiency.

- (a) **Finding and Notification.** If the CAISO's evaluation under Section 40.10.5.3(c) finds a cumulative deficiency in Flexible RA Capacity, the CAISO will --
- (1) identify each Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need using the cumulative amount of Flexible RA Capacity that the Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total and, for the monthly Flexible RA Capacity Plans, in each Flexible Capacity Category;
 - (2) identify each Load Serving Entity that: (i) is subject to the jurisdiction of a Local

Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need under Section 40.10.5.6; and (ii) did not include sufficient Flexible RA Capacity in an annual or monthly plan to meet its allocated Flexible RA Capacity Requirement or did not meet the monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, based on the allocation methodology of the Local Regulatory Authority if it has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities;

- (3) notify each Local Regulatory Authority identified under Section 40.10.5.6(a)(1) and the Scheduling Coordinator for each Load Serving Entity identified under Section 40.10.5.6(a)(2) of the cumulative deficiency in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and
 - (4) provide the notice at least 40 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a cumulative deficiency exists.
- (b) **Resolved Deficiency.** If the CAISO provides a notice of cumulative deficiency under Section 40.10.5.6(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall demonstrate, no less than 30 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan.
- (c) **Unresolved Deficiency.** If the CAISO provides a notice of deficiency under Section 40.10.5.6(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

* * * *

43A.2.1 SC Failure To Show Sufficient Local Capacity Area Resources

43A.2.1.1 Annual Resource Adequacy Plan

Where a Scheduling Coordinator fails to demonstrate in an annual Resource Adequacy Plan, submitted

separately for each represented LSE, procurement of each LSE's share of Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity), as determined in Section 40.3.2 for each month of the following Resource Adequacy Compliance Year, the CAISO shall have the authority to designate CPM Capacity; provided, however, that the CAISO shall not designate CPM Capacity under this Section 43A.2.1.1 until after the Scheduling Coordinator has had the opportunity to cure the deficiency set forth in Section 40.7. The CAISO's authority to designate CPM Capacity under this Section 43A.2.1.1 is to ensure that each Local Capacity Area in a TAC Area in which the LSE serves Load has Local Capacity Area Resources in the amounts and locations necessary to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, after assessing the effectiveness of Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans and any supplements thereto, as may be permitted by the CPUC, Local Regulatory Authority, or federal agency and provided to the CAISO in accordance with Section 40.7, whether or not such Generating Units under RMR Contracts and Resource Adequacy Resources are located in the applicable Local Capacity Area.

43A.2.1.2 Monthly Resource Adequacy Plan

Where a Scheduling Coordinator fails to demonstrate in a monthly Resource Adequacy Plan, submitted separately for each represented LSE, procurement of each LSE's share of Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity), as determined in Section 40.3.2 for the reported month, the CAISO shall have the authority to designate CPM Capacity; provided, however, that the CAISO shall not designate CPM Capacity under this Section 43A.2.1.2 until after the Scheduling Coordinator has had the opportunity to cure the deficiency as set forth in Section 40.7. In no case is the CAISO authorized to designate CPM Capacity under this Section 43A.2.1.2 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Local Capacity Area Resource that is on a Maintenance Outage at some point during the applicable month. The CAISO's authority to designate CPM Capacity under this Section 43A.2.1.2 is to ensure that each Local Capacity Area in a TAC Area in which the LSE serves Load has Local Capacity Area Resources in the amounts and locations necessary to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, after assessing the effectiveness of all Generating Units under RMR Contracts, if any, and all Resource Adequacy

Resources reflected in all submitted monthly Resource Adequacy Plans and any supplements thereto, as may be permitted by the CPUC, Local Regulatory Authority, or federal agency and provided to the CAISO in accordance with Section 40.7.

* * * *

43A.2.2 Collective Deficiency In Local Capacity Area Resources

The CAISO shall have the authority to designate CPM Capacity where the Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity) specified in the annual Resource Adequacy Plans of all applicable Scheduling Coordinators, after the opportunity to cure under Section 43A.2.2.1 has been exhausted, fail to ensure compliance in one or more Local Capacity Areas with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, regardless of whether such resources satisfy, for the deficient Local Capacity Area, the minimum amount of Local Capacity Area Resources identified in the Local Capacity Technical Study, and after assessing the effectiveness of Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans, whether or not such Generating Units under RMR Contracts and Resource Adequacy Resources are located in the applicable Local Capacity Area. The CAISO may, pursuant to this Section 43A.2.2, designate CPM Capacity in an amount and location sufficient to ensure compliance with the Reliability Criteria applied in the Local Capacity Technical Study.

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43A.2.3 SC Failure To Show Sufficient Resource Adequacy Resources

T The CAISO shall have the authority to designate CPM Capacity where a Scheduling Coordinator fails to demonstrate in an annual or monthly Resource Adequacy Plan, submitted separately for each represented LSE, procurement of sufficient Resource Adequacy Resources to comply with each LSE's annual and monthly Demand and Reserve Margin requirements under Section 40; provided that the CAISO shall not designate CPM Capacity under this Section 43A.2.3 until after the Scheduling Coordinator has had the opportunity to cure the deficiency as set forth in Section 40.7; provided further that the CAISO shall not designate CPM Capacity under this Section 43A.2.3 unless there is an overall

net deficiency in meeting the total annual or monthly Demand and Reserve Margin requirements, whichever is applicable, after taking into account all LSE demonstrations in their annual or monthly Resource Adequacy Plans. Furthermore, in no case is the CAISO authorized to designate CPM Capacity under this Section 43A.2.3 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Resource Adequacy Resource that is on a Maintenance Outage at some point during the applicable month.

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43A.2.7 Cumulative Deficiency in Flexible RA Capacity

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43A.2.7.2 Designation

After the opportunity to resolve the cumulative deficiency under Section 40.10.5.4 has been exhausted, if total required Flexible RA Capacity reported to the CAISO in revised annual or monthly Flexible RA Capacity Plans does not meet the Flexible RA Capacity Need in accordance with this Section, the CAISO may issue a Flexible Capacity CPM designation in an amount sufficient to alleviate the deficiency. In no case, however, is the CAISO authorized to designate CPM Capacity under this Section 43A.2.7.2 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Flexible RA Capacity resource that is on a Maintenance Outage at some point during the applicable month.

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43A.4.2 Administering the CSPs

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43A.4.2.2 Minimizing the Overall Cost of Meeting the Reliability Need

Once the CAISO has identified the pool of resources that can meet the designation criteria, the CAISO shall then designate Eligible Capacity from that pool of resources in order to minimize the overall cost of meeting the designation criteria. Aside from considering the respective offer prices from the Eligible

Capacity, as part of this cost minimization the CAISO also may consider: the quantity of a resource's available Eligible Capacity, based on a resource's PMin, relative to the remaining amount of capacity needed; and the quantity of a resource's available Eligible Capacity, based on outages and substitute daily RA Capacity.

For a potential Exceptional Dispatch CPM, the CAISO also shall consider the overall costs to the CAISO of issuing the Exceptional Dispatch to RA Capacity rather than to Eligible Capacity. If the CAISO determines it would minimize overall costs to issue the Exceptional Dispatch to RA Capacity, then the CAISO shall issue the Exceptional Dispatch to RA Capacity and not designate Eligible Capacity as CPM Capacity to meet the designation criteria.

If capacity would receive a CPM designation based on the cost minimization criteria but the resource from which the capacity would be provided faces use limitations such that the capacity, in the CAISO's reasonable discretion, poses the risk of being unavailable to fully meet the reliability need creating the CPM event, then the CAISO may, at its reasonable discretion and giving due regard for meeting cost minimization considerations, not grant that capacity a CPM designation and instead grant the designation to the next-best capacity at meeting the CAISO cost minimization process defined in this Section 43A.4.2.2. In exercising this discretion, the CAISO shall not unduly discriminate against resources with use limitations.

Additionally, if capacity would receive a CPM designation based on the cost minimization criteria but the resource from which the capacity would be provided is already going to be RA Capacity at some point during the CPM designation period and, in the CAISO's reasonable discretion, poses the risk of the capacity being unavailable fully to meet the reliability need creating the need for a CPM designation, then the CAISO may, at its reasonable discretion and giving due regard for meeting cost minimization considerations, not grant that capacity a CPM designation and instead grant the designation to the next-best capacity at meeting the CAISO cost minimization process defined in this Section 43A.4.2.2.

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43A.8.8 Allocation of Flexible Capacity CPM Costs

(a) Calculation of Deficiency by LRA.

(1) The CAISO will determine whether each Local Regulatory Authority met its allocable share of the Flexible Capacity Need based on the cumulative amount of Flexible RA Capacity that Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total, and included in their monthly Flexible RA Capacity Plans for each Flexible Capacity Category.

(2) The CAISO will calculate the total amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans collectively for all Load Serving Entities within the Local Regulatory Authority, and the total amount included in the monthly Flexible RA Capacity Plans for each Flexible Capacity Category using the minimum or maximum quantity, as applicable, for each category, and using the Effective Flexible Capacity value calculated under Section 40.10.4 for each resource designated in a plan as a Flexible RA Capacity Resource.

(b) **Allocation By CAISO Method.**

(1) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, in total and in each Flexible Capacity Category, meets or exceeds the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, the CAISO will not allocate any of the Flexible Capacity CPM costs to the Scheduling Coordinators for those Load Serving Entities.

(2) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, either in total or for a Flexible Capacity Category, is less than the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, and that Local Authority has not established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will allocate the Flexible Capacity CPM costs proportionately to the Scheduling Coordinator of each jurisdictional Load Serving Entity that failed to meet its procurement obligation.

(c) **Allocation by Local Regulatory Authority Method.** If Load Serving Entities jurisdictional to a Local Regulatory Authority have a cumulative deficiency under Section 43A.8.8(a) and the Local Regulatory Authority has established its own methodology for allocating the Flexible Capacity Need to its

jurisdictional Load Serving Entities, the CAISO will use the Local Regulatory Authority's methodology to allocate the Flexible Capacity CPM costs to the Scheduling Coordinator of each Load Serving Entity that is jurisdictional to that Local Regulatory Authority and that failed to meet its procurement obligation. If the Local Regulatory Authority does not notify the CAISO of its allocation method by the deadline established in the relevant Business Practice Manual, then the CAISO allocates Flexible Capacity CPM costs using its default allocation methodology under Section 43A.8.8(b)(2).

(d) **Reduction of Cost Allocation.** If the CAISO issues a Flexible Capacity CPM designation, a Scheduling Coordinator for a Load Serving Entity that was deficient, but provided additional Flexible RA Capacity in a revised annual or monthly Flexible RA Capacity Plan consistent with the Market Notice under Section 43A.2.7.1 --

(1) will be not be allocated a share of the Flexible Capacity CPM procurement costs if the additional Flexible RA Capacity included in that LSE's revised LSE Flexible RA Capacity Plan resolved the total deficiency of that Load Serving Entity; or

(2) will be allocated a share of the Flexible Capacity CPM procurement costs on a proportionate basis to the extent that Load Serving Entity has a remaining partial deficiency.

(e) **Small Load Serving Entity Exemption.** Notwithstanding the above, a Scheduling Coordinator for a Load Serving Entity will not be allocated any costs under this section 43A.8.8 if that Load Serving Entity's contribution to the three-hour net load ramp is less than 1 MW in all 12 months of the calendar year in which the Flexible Capacity CPM occurs. Any CPM costs that are unallocated as a result of this exemption will be allocated to the remaining Scheduling Coordinators using the default allocation methodology under Section 43A.8.8(b)(2)

* * * *

Appendix A

Definitions to the CAISO Tariff

- Committed RA Capacity

Capacity that is either RA Capacity, Flexible RA Capacity, RA Substitute Capacity, CPM Capacity, or Flexible Capacity CPM.

- [Not Used]

- Local Capacity Area Resource Deficiency

The monthly difference in MW between any applicable Local Capacity Area requirements for an LSE as established pursuant to Section 40.3.2 and the quantity of monthly MW shown in the LSE's Resource Adequacy Plan.

- Local Capacity Area Resource

Resource Adequacy Capacity from a Generating Unit listed in the technical study or Participating Load or Proxy Demand Resource or Reliability Demand Response Resource that is located within a Local Capacity Area capable of contributing toward the amount of capacity required in a particular Local Capacity Area.

- Listed Local RA Capacity

The capacity of Local Capacity Area Resources that, subject to resolution of a potential discrepancy as provided in Section 40.7(b), is identified on a Load Serving Entity's Resource Adequacy Plan and a supplier's corresponding Supply Plan as being obligated (for the purposes of sections 40.9.3.6.7 and 40.9.3.6.8) to provide RA Substitute Capacity from the same Local Capacity Area as the Listed Local RA Capacity.

- Off-Peak Opportunity RA Maintenance Outage

A Maintenance Outage at a Resource Adequacy Resource that is approved by the CAISO to be initiated and completed during off-peak hours (as specified in the Business Practice Manual) without RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

- RA Maintenance Outage With Substitution

A Maintenance Outage, or change to an Approved Maintenance Outage, at a Resource Adequacy Resource that the CAISO receives no less than eight (8) days prior to the start of the outage and that includes RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

- RA Maintenance Outage Without Substitution

A Maintenance Outage, or change to an Approved Maintenance Outage at a Resource Adequacy Resource that the CAISO receives no less than eight (8) days prior to the start of the outage without RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

- [Not Used]

- RA Substitute Capacity

Capacity that the CAISO permits under the CAISO Tariff to be substituted for a Resource Adequacy Resource that is on Outage.

- Short-Notice Opportunity RA Maintenance Outage

A Forced Outage at a Resource Adequacy Resource accommodated by the CAISO on short notice without RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

- [Not Used]

- [Not Used]

* * * *

Appendix AA

Grandfathered Resource Adequacy Provisions for February 2018 to March 2018

Notwithstanding any other provisions of the CAISO Tariff, the following provisions shall apply to the CAISO's treatment of RA Capacity for the February 2018 and March 2018 RA months. In all other respects, the CAISO Tariff (including the provisions of Section 9, Section 40, Section 43A, and Appendix A) not covered by this Appendix AA, will apply to the CAISO's treatment of RA Capacity for the February 2018 and March 2018 RA months.

* * * *

9.3.1.3 Coordinating Maintenance Outages of RA Resources

In performing outage coordination management under Section 9, and this Section 9.3.1.3, the CAISO may take into consideration the status of a Generating Unit as a Resource Adequacy Resource. The CAISO may deny, reschedule or cancel an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid or Generating Units of Participating Generators if it determines that the outage is likely to have a detrimental effect on the availability of Resource Adequacy Capacity or the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

9.3.1.3.1 Replacement Requirement for LSEs

9.3.1.3.1.1 LSE RA Plans

Each Scheduling Coordinator for a Load Serving Entity shall submit to the CAISO a monthly Resource Adequacy Plan that meets the requirements set forth in Sections 40.2.2.4 or 40.2.3.4, as applicable. Resource Adequacy Capacity included in the monthly Resource Adequacy Plan that, as of the due date for the plan, is scheduled to take an Approved Maintenance Outage during the period of designation may be subject to replacement. To the extent that a resource included in a monthly Resource Adequacy Plan as Resource Adequacy Capacity is scheduled to take an Approved Maintenance Outage for all or portion of its capacity during the resource adequacy month, the capacity scheduled for outage is not operationally available to the CAISO and may be required by the CAISO to be replaced with capacity from another resource(s) that is operationally available in the amount and for the duration of the scheduled outage during that month, as discussed in Sections 9.3.1.3.2.2 through 9.3.1.3.2.5.

9.3.1.3.1.2 RA Resource Pending Maintenance Outage Requests

If a Resource Adequacy Resource requested a planned Maintenance Outage, or change to an Approved

Maintenance Outage, more than forty-five days prior to the first day of the resource adequacy month, but does not receive approval or denial of the request by the CAISO as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO, as part of the validation under Sections 9.3.1.3.2.3 and 40.7(b), will determine whether the outage should be approved and, if so, whether it must be replaced in the Resource Adequacy Plan with capacity from another resource that is operationally available in the amount and for the duration of the scheduled outage during the month.

9.3.1.3.1.3 Optional List of Specified RA Replacement Capacity

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Specified RA Replacement Capacity for the CAISO's use as RA Replacement Capacity to replace specific Resource Adequacy Capacity identified by the Load Serving Entity that is in its Resource Adequacy Plan, and that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.2 and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Specified RA Replacement Capacity, the CAISO, in its discretion, will use the specified capacity as RA Replacement Capacity to automatically replace the identified Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days specified by the Load Serving Entity that the Resource Adequacy Resource is scheduled to take an Approved Maintenance Outage during the month. The Specified RA Replacement Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the specified capacity is used by the CAISO as RA Replacement Capacity as provided in Section 9.3.1.3.2.2. The list of Specified RA Replacement Capacity included with a monthly Resource Adequacy Plan shall:

- (a) Identify the resource being replaced,
- (b) Identify the resource that will provide the Specified RA Replacement Capacity, the MW amount and time period of the replacement, and other information as may be required in the Business Practice Manuals, and
- (c) Be submitted in the format required by the Business Practice Manual.

9.3.1.3.1.4 Optional List of Non-Specified RA Capacity

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan

a list of Non-Specified RA Capacity for the CAISO's use as RA Replacement Capacity to replace Resource Adequacy Capacity included in that Load Serving Entity's monthly Resource Adequacy Plan that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.3, 9.3.1.3.2.4, and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Non-Specified RA Capacity in its Resource Adequacy Plan, the CAISO, in its discretion, will select capacity from the list and use the selected capacity as RA Replacement Capacity to automatically replace Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days on which the CAISO's validation of the plan determines that the designated capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month must be replaced. The listed Non-Specified RA Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the Non-Specified Capacity is selected by the CAISO and used as RA Replacement Capacity as provided in Section 9.3.1.3.2.4. The list of Non-Specified RA Capacity included with a monthly Resource Adequacy Plan shall:

- (a) Rank each resource that has available Non-Specified RA Capacity in the order of use preferred by the Load Serving Entity;
- (b) Provide the identity of the resource, the MW amount of available capacity, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual;
- (c) Indicate the willingness of the Load Serving Entity to offer each resource that has available Non-Specified RA Capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A; and
- (d) Be submitted in the format required by the Business Practice Manuals.

9.3.1.3.2 CAISO Replacement Determination For LSE RA Plans

9.3.1.3.2.1 Review of LSE RA Plans

The CAISO shall review each monthly Resource Adequacy Plan pursuant to Section 40.7(b) to validate that the capacity provided is equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for the Load Serving Entity and shall provide the results of this review to the Local

Regulatory Authority. Additionally, the CAISO will review each monthly Resource Adequacy Plan to identify any Resource Adequacy Capacity included in the plan that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month.

9.3.1.3.2.2 Replacement By Specified RA Replacement Capacity

If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes no capacity that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, no replacement by Specified RA Replacement Capacity will occur. If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes capacity that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, and the Load Serving Entity has provided a list of Specified RA Replacement Capacity, then the CAISO will verify that the Specified RA Replacement Capacity is available during the specified replacement period and will replace the unavailable capacity in that Load Serving Entity's Resource Adequacy Plan with the available Specified RA Replacement Capacity. The CAISO will not accept any Specified RA Replacement Capacity that is unavailable during the specified replacement period. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity that the Specified RA Replacement Capacity has been accepted as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity must verify their agreement to provide the Specified RA Replacement Capacity. For the duration of the period that the resource is providing Specified RA Replacement Capacity, the resource shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6, and the standard capacity product provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.2.3 CAISO Replacement Determination

Following replacement by Specified RA Replacement Capacity, the CAISO will determine whether Load Serving Entities are required to replace any capacity remaining in their monthly Resource Adequacy

Plans that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month. The CAISO will make the replacement determination as follows:

- (a) For each day of the month, the CAISO will calculate the System Total Available RA Capacity provided in the Resource Adequacy Plans and compare that MW amount to the CAISO system RA Reliability Margin.
- (b) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans exceeds the CAISO system RA Reliability Margin, the CAISO may determine that no further replacement is required.
- (c) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans is less than the CAISO system RA Reliability Margin, the CAISO may require replacement of the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, as provided in Sections 9.3.1.3.2.3 and 9.3.1.3.2.4. When replacement is required, the Scheduling Coordinator for each Load Serving Entity that did not include in its Resource Adequacy Plan available Resource Adequacy Capacity for the day in a MW amount equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for that Load Serving Entity will be required to provide the RA Replacement Capacity.
- (d) When replacement is required under Section 9.3.1.3.2.3(c), the CAISO will consider whether the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage requires replacement in the reverse order of the dates on which the outage requests were received. The Resource Adequacy Capacity subject to the most recently requested Approved Maintenance Outages will require replacement before the Resource Adequacy Capacity subject to Approved Maintenance Outages that were requested on earlier dates. Any request for a change to an Approved Maintenance Outage that extends the scheduled duration of the outage or increases the MW amount of capacity on outage will be treated as a new outage request.
- (e) Beginning with the date of the most recent request to take an Approved Maintenance Outage during the month, the CAISO will either replace the unavailable Resource

Adequacy Capacity with Non-Specified RA Replacement Capacity under Section 9.3.1.3.2.4, or will require the Scheduling Coordinator for the Load Serving Entity to replace the unavailable Resource Adequacy Capacity under Section 9.3.1.3.2.5. The CAISO will continue this replacement process in reverse order of the dates on which the requests to take the Approved Maintenance Outages were received until sufficient unavailable Resource Adequacy Capacity has been replaced each day to meet the criteria set forth in Section 9.3.1.3.2.3(b).

9.3.1.3.2.4 Replacement By Non-Specified RA Replacement Capacity

For each day of the month where the CAISO determines under Section 9.3.1.3.2.3 that replacement is required of Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, the CAISO may replace the unavailable capacity with Non-Specified RA Replacement Capacity as follows:

- (a) The CAISO will identify each Load Serving Entity that did not include in its monthly Resource Adequacy Plan available Resource Adequacy Capacity for each day in a MW amount equal to or greater than its applicable forecasted monthly Demand Reserve Margin, and will verify whether each such Load Serving Entity provided a list of Non-Specified RA Replacement Capacity with its plan.
- (b) To the extent that a Load Serving Entity provided a list of Non-Specified Replacement Capacity, the CAISO during the replacement process set forth in Section 9.3.1.3.2.3 will select capacity, in its discretion, from the list and use the selected capacity as RA Replacement Capacity to automatically replace unavailable Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan for each day where the CAISO determines that replacement is required.
- (c) The CAISO will verify whether the Non-Specified RA Replacement Capacity on each list is available during the replacement period and replace the unavailable capacity in the Resource Adequacy Plan with available Non-Specified RA Replacement Capacity. The CAISO will not accept Non-Specified RA Replacement Capacity that is unavailable during the replacement period.
- (d) The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and the

Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity that the Non-Specified RA Replacement Capacity has been selected as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity must verify its agreement to provide the Non-Specified RA Replacement Capacity.

- (e) For the duration of the period that the Non-Specified RA Capacity is providing RA Replacement Capacity, it shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the standard capacity product provisions in Section 40.9 for the MW amount and duration of the replacement period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.2.5 Unreplaced Capacity In An RA Plan

Following replacement by Non-Specified Capacity, for each day of the month where the criteria set forth in Section 9.3.1.3.2.3(b) is not met, and where the Load Serving Entity either did not provide Non-Specified RA Replacement Capacity, or the Non-Specified RA Replacement Capacity it provided was already selected by the CAISO, was insufficient, or was unavailable during the replacement period, the Scheduling Coordinator for the Load Serving Entity will have a replacement requirement. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity of the replacement requirement and will identify the MW amount of capacity remaining in its Resource Adequacy Plan that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage on that day and that it is required to replace. The CAISO will treat the unreplaced capacity as an outage replacement requirement pursuant to Section 40.7(b). If the Scheduling Coordinator for the Load Serving Entity does not provide sufficient operationally available RA Replacement Capacity to meet the replacement requirement identified by the CAISO, and the resource does not reschedule or cancel the outage after its Supply Plan is submitted, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A.

9.3.1.3.3 Replacement Requirement for RA Resources

To the extent that a resource is committed to provide Resource Adequacy Capacity during a month, the Scheduling Coordinator for the resource may request an RA Maintenance Outage With Replacement, RA Maintenance Outage Without Replacement, Off Peak Opportunity RA Maintenance Outage, or Short-Notice Opportunity RA Outage, or may request to reschedule an Approved Maintenance Outage, for that Resource Adequacy Capacity in accordance with the provisions of this Section. The timelines set forth in this Section for submitting an Outage request and classifying the outage as a Maintenance Outage or a Forced Outage exclude the day that the request is submitted and the day that the outage is scheduled to commence.

9.3.1.3.3.1 RA Maintenance Outage With Replacement

(a) **Replacement Option.** The Scheduling Coordinator of a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a planned Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage With Replacement during that month.

(b) **Request.** A request for an RA Maintenance Outage With Replacement must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start of the outage; (ii) provide RA Replacement Capacity in an amount no less than the Resource Adequacy Capacity designated for the resource for the duration of the scheduled outage; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an RA Maintenance Outage With Replacement in the order that the requests are received.

(2) The CAISO may approve the request for an RA Maintenance Outage With Replacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.1(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the request was submitted no more than forty-five days prior to the first day of the

resource adequacy month that the outage is requested for, and no less than eight days prior to the start date for the outage, and it meets the requirements in Section 9.3.1.3.3.1(c)(2), the CAISO may approve the request as an RA Maintenance Outage With Replacement,

(4) If the CAISO denies the request for failing to meet the requirements in Section 9.3.1.3.3.1(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request a different schedule for the RA Maintenance Outage With Replacement or may request that the CAISO accommodate the outage without RA Replacement Capacity at another time.

(d) **Resource Adequacy Obligation.** The RA Replacement Capacity for an RA Maintenance Outage With Replacement approved under Section 9.3.1.3.3.1(c)(3) shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAAIM provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.3.2 RA Maintenance Outage Without Replacement

(a) **Option for No Replacement.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage Without Replacement, without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.

(b) **Request.** A request for an RA Maintenance Outage Without Replacement must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start date of the outage; and (ii) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider requests received for an RA Maintenance Outage Without

Replacement in the order the requests were received.

- (2) The CAISO may approve a request for an RA Maintenance Outage Without Replacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.2(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The analysis of system conditions and the overall outage schedule will include Approved Maintenance Outage requests that were received before and after the request for an RA Maintenance Outage Without Replacement.
- (3) The CAISO will not approve a request for an RA Maintenance Outage Without Replacement earlier than seven days before the first day of the resource adequacy month, and may hold the request as pending until system conditions are sufficiently known for the CAISO to determine whether the outage meets the requirements in Section 9.3.1.3.3.2(c)(2).
- (4) If the CAISO denies a request for an RA Maintenance Outage Without Replacement for failing to meet the requirements in Section 9.3.1.3.3.2(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO accommodate the outage at another time.

9.3.1.3.3.3 Off-Peak Opportunity RA Maintenance Outage

- (a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.
- (b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage; (ii) schedule the outage to begin during off-peak hours (as specified in the Business

Practice Manuals) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manuals) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manuals) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

- (1) The CAISO will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.
- (2) If the request was submitted no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage, the CAISO may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that: (i) the request meets the requirements set forth in Section 9.3.1.3.3.3(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.
- (3) If the CAISO denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.3.3(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO accommodate the outage at another time.
- (4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

9.3.1.3.3.4 Short-Notice Opportunity RA Outage

- (a) **Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may

submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide RA Replacement Capacity or RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage or de-rate.

- (b) A Short-Notice Opportunity RA Outage shall not exceed five days in length. The request for a Short-Notice Opportunity RA Outage must: (i) be submitted no more than seven days prior to the requested start date for the outage; (ii) provide the CAISO adequate time to analyze the request before the outage begins; (iii) be submitted before the outage has commenced as a Forced Outage; and (iv) otherwise comply with the requirements of Section 9.

(c) **Approval.**

- (1) The CAISO will consider Short-Notice Opportunity RA Outages in the order the requests are received.
- (2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO may approve the request as a Short Notice Opportunity RA Outage if it determines that: (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will be subject to the RAAIM provisions in Section 40.9.
- (3) If the request was submitted three days or less prior to the start date of the outage, the CAISO may approve the request as a Forced Outage if it determines that: (i) the outage and request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period; and (iv) the repairs are necessary to maintain system or resource reliability and require immediate attention to prevent

equipment damage or failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage but it will not be subject to the RAAIM provisions in Section 40.9.

- (4) To the extent that an approved Short-Notice Opportunity RA Outage is not completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the RAAIM provisions in Section 40.9.

9.3.1.3.4 Replacement Requirement Information

In order to make information available to Market Participants pertinent to the replacement requirement provisions in Section 9.3.1.3, the CAISO will:

- (a) Annually post on the CAISO Website a calendar of the timeline of due dates for each month of the following resource adequacy compliance year; and
- (b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity and Non-Designated RA Capacity that may be needed or available as RA Replacement Capacity in the bilateral market. Use of the bulletin board is voluntary and limited to use for informational purposes only.

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40.2.1 Reserve Sharing Load Serving Entities

40.2.1.1 Requirements for CPUC Load Serving Entities

- (a) The Scheduling Coordinator for a CPUC Load Serving Entity must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, except that the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no less than 45 days in advance of the first day of the

month covered by the plan, as provided in Section 40.2.1.1(e).

- (b) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1(b) shall apply.
- (c) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity, then the provisions of Section 40.8 shall apply.
- (d) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Demand Forecast requirements, then the provisions of Section 40.2.2.3 shall apply.
- (e) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Resource Adequacy Plan requirements, or where there is a requirement to submit monthly Resource Adequacy Plans but the submission date is less than 45 days in advance of the first day of the month covered by the plan, then Section 40.2.2.4 shall apply.

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40.2.2.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity, as follows:

- (a) Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity as described in Section 40.3.
- (b) Each monthly Resource Adequacy Plan or the same information as required to be included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the

reporting format(s) set forth in the Business Practice Manual. The monthly Resource Adequacy Plan must identify all resources, including Local Capacity Area Resources, the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving Entity as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3 and applicable Reserve Margin. Resource Adequacy Plans must utilize the Net Qualifying Capacity requirements of Section 40.4.

- (c) The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.
- (d) In order to ensure that the CAISO's outage replacement determination remains accurate, the Scheduling Coordinator for the Load Serving Entity that submits a revision to its monthly Resource Adequacy Plan to correct an error must include in the revision a MW amount of Resource Adequacy Capacity for each day of month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.
- (e) In order to ensure that the amount of Resource Adequacy Capacity required to be included in the Load Serving Entity's Resource Adequacy Plan is operationally available to the CAISO throughout the resource adequacy month, the Load Serving Entity that submits the monthly Resource Adequacy Plan is subject to the replacement requirement in Section 9.3.1.3.1.

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40.3.2 Allocation of Local Capacity Area Resource Obligations

The CAISO will allocate responsibility for Local Capacity Area Resources to Scheduling Coordinators for Load Serving Entities in the following sequential manner:

- (a) The responsibility for the aggregate Local Capacity Area Resources required for all Local Capacity Areas within each TAC Area as determined by the Local Capacity Technical Study will be allocated to all Scheduling Coordinators for Load Serving Entities that serve

Load in the TAC Area in accordance with the Load Serving Entity's proportionate share of the LSE's TAC Area Load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak Demand Forecast for the next Resource Adequacy Compliance Year as determined by the California Energy Commission. Expressed as a formula, the allocation of Local Area Capacity Resource obligations will be as follows: $(\sum \text{Local Capacity Area MW in TAC Area from the Local Capacity Technical Study}) * (\text{LSE Demand in TAC Area at CAISO annual coincident peak Demand}) / (\text{Total TAC Area Demand at the time of CAISO annual coincident peak Demand})$. This will result in a MW responsibility for each Load Serving Entity for each TAC Area in which the LSE serves Load. The LSE may meet its MW responsibility, as assigned under this Section, for each TAC Area in which the LSE serves Load by procurement of that MW quantity in any Local Capacity Area in the TAC Area.

- (b) For Scheduling Coordinators for Non-CPUC Load Serving Entities, the Local Capacity Area Resource obligation will be allocated based on Section 40.3.2(a) above.
- (c) For Scheduling Coordinators for CPUC Load Serving Entities, the CAISO will allocate the Local Capacity Area Resource obligation based on an allocation methodology, if any, adopted by the CPUC. However, if the allocation methodology adopted by the CPUC does not fully allocate the total sum of each CPUC Load Serving Entity's proportionate share calculated under Section 40.3.2(a), the CAISO will allocate the difference to all Scheduling Coordinators for CPUC Load Serving Entities in accordance with their proportionate share calculated under 40.3.2(a). If the CPUC does not adopt an allocation methodology, the CAISO will allocate Local Capacity Area Resources to Scheduling Coordinators for CPUC Load Serving Entities based on Section 40.3.2(a).

Once the CAISO has allocated the total responsibility for Local Capacity Area Resources, the CAISO will inform the Scheduling Coordinator for each LSE of the LSE's specific allocated responsibility for Local Capacity Area Resources in each TAC Area in which the LSE serves Load.

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40.4.7 Submission Of Supply Plans

40.4.7.1 Schedule for Submission of Supply Plans

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with annual and monthly Supply Plans, as follows:

- (a) The annual Supply Plan shall be submitted to the CAISO on the schedule set forth in the Business Practice Manual and shall verify their agreement to provide Resource Adequacy Capacity during the next Resource Adequacy Compliance Year.
- (b) The monthly Supply Plans or the same information as required to be included in the monthly Supply Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual, and shall verify their agreement to provide Resource Adequacy Capacity during that resource adequacy month.
- (c) The Scheduling Coordinator for the Resource Adequacy Resource may submit, at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Supply Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Supply Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource Adequacy Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.
- (d) The monthly Supply Plan may indicate the willingness of the resource to offer capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43, and provide the identity of the resource, the available capacity amount, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual.

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40.7 Compliance

The CAISO will evaluate Resource Adequacy Plans and Supply Plans as follows:

- (a) The CAISO will evaluate whether each annual and monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates Resource Adequacy Capacity sufficient to satisfy the Load Serving Entity's (i) allocated responsibility for Local Capacity Area Resources under Section 40.3.2 and (ii) applicable Demand and Reserve Margin requirements. If the CAISO determines that a Resource Adequacy Plan does not demonstrate Local Capacity Area Resources sufficient to meet its allocated responsibility under Section 40.3.2, compliance with applicable Demand and Reserve Margin requirements, or compliance with any other resource adequacy requirement in this Section 40 or adopted by the CPUC, Local Regulatory Authority, or federal agency, as applicable, the CAISO will notify the relevant Scheduling Coordinator, CPUC, Local Regulatory Authority, or federal agency with jurisdiction over the relevant Load Serving Entity, or in the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), the relevant Scheduling Coordinators, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons the CAISO believes a deficiency exists. If the deficiency relates to the demonstration of Local Capacity Area Resources in a Load Serving Entity's annual Resource Adequacy Plan, and the CAISO does not provide a written notice of resolution of the deficiency as set forth in the Business Practice Manual, the Scheduling Coordinator for the Load Serving Entity may demonstrate that the identified deficiency is cured by submitting a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year. For all other identified deficiencies, at least ten (10) days prior the effective month of the relevant Resource Adequacy Plan, the Scheduling Coordinator for the Load Serving Entity shall (i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan or (ii) advise the CAISO that the CPUC, Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.
- (b) The CAISO will evaluate whether each monthly Resource Adequacy Plan submitted by a

Scheduling Coordinator on behalf of a Load Serving Entity demonstrates operationally available Resource Adequacy Capacity, excluding capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month, that is equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. For each day of the month where the CAISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, if a monthly Resource Adequacy Plan (i) includes capacity scheduled to take an Approved Maintenance Outage on that day that has not been replaced pursuant to Sections 9.3.1.3.1, or 9.3.1.3.2, and (ii) does not demonstrate operationally available Resource Adequacy Capacity equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin, the CAISO will require outage replacement and will provide notice of the outage replacement requirement to the Local Regulatory Authority, the Scheduling Coordinator for the Load Serving Entity, and the Scheduling Coordinator for the Resource Adequacy Resource scheduled to take the Approved Maintenance Outage. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons why the CAISO believes an outage replacement requirement exists. At least eleven (11) days prior to the resource adequacy month, the Scheduling Coordinator for either the Load Serving Entity or the Resource Adequacy Resource may demonstrate that the identified outage replacement requirement is cured by submitting to the CAISO a revision or update to the monthly Resource Adequacy Plan or Supply Plan, as applicable. If neither the Scheduling Coordinator for the Load Serving Entity nor the Scheduling Coordinator for the Resource Adequacy Resource timely advises the CAISO that the identified outage replacement requirement is cured, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A.

- (c) In the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), if resolved, the relevant Scheduling Coordinator(s) must provide the CAISO with revised Resource Adequacy Plan(s) or Supply Plans, as applicable, at least ten (10) days prior to

the effective month. If the CAISO is not advised that the deficiency or mismatch is resolved at least ten (10) days prior to the effective month, the CAISO will use the information contained in the Supply Plan to set the obligations of Resource Adequacy Resources under this Section 40 and/or to assign any costs incurred under this Section 40 and Section 43A.

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40.9.3.4 Treatment of Maintenance Outages

- (a) **Replacement Not Required.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity --
- (1) with an Approved Maintenance Outage or pending request for a Maintenance Outage as of 45 days prior to the start date of the Resource Adequacy month; however any subsequent incremental increase in the MWs or duration of the outage will be subject to RAAIM unless RA Replacement Capacity for the incremental outage is required and provided or is not required; or
 - (2) on an Approved Maintenance Outage during the Resource Adequacy month that does not require RA Replacement Capacity under Section 9.3.1.3.3.
- (b) **Replacement Requirement Provided.** For each Maintenance Outage that a Resource Adequacy Resource requests less than 45 days prior to the start of the relevant resource adequacy month and that requires RA Replacement Capacity --
- (1) the RAAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource provides RA Replacement Capacity for that outage as required under Section 9.3.1.3.3; and
 - (2) the RAAIM Availability Assessment for the replacement resource includes the capacity, duration, and must-offer requirement for the RA Replacement Capacity commitment.
- (c) **Replacement Requirement Not Provided.** For each Maintenance Outage that a Resource Adequacy Resource requests less than 45 days prior to the start of the relevant resource

adequacy month, the RAAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource does not provide RA Replacement Capacity for the outage as required under Section 9.3.1.3.3.

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40.9.3.5 Treatment of Forced Outages

(a) RA Substitute Capacity - Local And System

(1) The RAAIM Availability Assessment for a Resource Adequacy Resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6.

(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity.

(b) RA Substitute Capacity - Flexible

(1) The RAAIM Availability Assessment for a Flexible RA Resource includes the capacity, duration, and must-offer requirement for Flexible RA Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for that outage in accordance with Section 40.9.3.6.

(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity.

(3) For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement.

(c) **Exclusions from RAAIM.** The RAAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use

limitation, as those categories are specified in the Business Practice Manual.

- (d) Scheduling Coordinators for Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10 shall report outages and de-rates in accordance with the process set forth the Business Practice Manual.

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40.9.3.6 Substitute Capacity

(a) Substitution

- (1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage or de-rate.
- (2) If the Resource Adequacy Resource on outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) Availability

- (1) RA Substitute Capacity must be operationally available to the CAISO:
- (2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.
- (3) RA Replacement Capacity, RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.
- (4) RA Substitute Capacity shall not qualify to be RA Replacement Capacity, RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.
- (5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy

Resources under Section 40.9.3.6.3, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.

- (6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

- (1) **Day-Ahead Market.** Requests for substitution in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.
- (2) **Real-Time Market.** Requests for substitution in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

40.9.3.6.1 RA Substitute Capacity From A Single Resource

- (a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on a Forced Outage or de-rate may provide RA Substitute Capacity for that capacity from a single resource.

(b) **Local Capacity Area Resource Substitution**

- (1) **Pre-Qualified Substitution.**
 - (A) **Annual Process.** The CAISO will annually conduct a process to assess the eligibility of resources to pre-qualify as RA Substitute Capacity for Local Capacity Resource Adequacy Resources. The CAISO will publish a list of the pre-qualified resources in accordance with the timeline in the Business Practice Manual.
 - (B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy Resource for which it could substitute.

- (C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in accordance with Section 40.9.3.6(c).
 - (D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(1)(C) and 40.9.3.6(b).
- (2) **Non-Pre-Qualified Substitution.**
- (A) **Day-Ahead Market.** The Scheduling Coordinator for a Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute a non-pre-qualified resource only in the Day-Ahead Market.
 - (B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource must submit a timely substitution request in accordance with Section 40.9.3.6(c), and the alternate resource must be located in the same Local Capacity Area.
 - (C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(2)(A) and (B), and 40.9.3.6(b).
- (c) **Non-Local Capacity Area Resource Substitution**
- (1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c).
 - (2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.1(c)(1) and 40.9.3.6(b).
- (d) **External Resources**
- (1) **Request.** To use a Dynamic System Resource, Non-Dynamic System Resource, NRS-RA Resource, or Pseudo-Tie as RA Substitute Capacity, the Scheduling Coordinator for

a Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c).

- (2) **Approval.** The CAISO will grant the request if the alternate resource is external to the CAISO Balancing Authority Area (including Pseudo-Ties), the Scheduling Coordinator for the resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meets the requirements in Sections 40.9.3.6.1(d)(1) and 40.9.3.6(b).

(e) **Flexible RA Capacity**

- (1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.
- (2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable requirements in Sections 40.9.3.6.1(e) and 40.9.3.6(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the highest quality Flexible Capacity Category for the MWs of the Flexible RA Capacity commitments of the resource on outage and the alternate resource.

40.9.3.6.2 RA Substitute Capacity From Multiple Resources

- (a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) **Local Capacity Area Resource Substitution**

- (1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced

Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c) if any of the alternate resources are not pre-qualified to substitute for the resource on the outage; however, if all of the alternate resources are pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

- (2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.2(b)(1) and 40.9.3.6(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity Area as the Resource Adequacy Resource.

(c) **Non-Local Capacity Area Resources**

- (1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market in accordance with Section 40.9.3.6(c).
- (2) **Approval.** The CAISO will grant the request if all of the alternate resources meet the requirements in Sections 40.9.3.6.2(c)(1) and 40.9.3.6(c).

(d) **External Resources**

- (1) **Request.** To use multiple Dynamic System Resources, Non-Dynamic System Resources, NRS-RA Resources, or Pseudo-Ties as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c).
- (2) **Approval.** The CAISO will grant the request if the alternate resources are external to the CAISO Balancing Authority Area (including Pseudo-Ties), and the Scheduling Coordinator of each alternate resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meet the requirements in Sections 40.9.3.6.e(d)(1) and 40.9.3.6(b).

(e) **Flexible RA Capacity**

- (1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources must be located in the CAISO Balancing Authority Area, which does not include a Pseudo-Tie of a Generating Unit or a Resource-Specific System Resource.
- (2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.3.6.2(d)(1) and 40.9.3.6(c).

40.9.3.6.3 Multiple Substitution by One Resource. The Scheduling Coordinator for a resource already providing RA Substitute Capacity may provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on a Forced Outage or de-rate, subject to approval by the CAISO pursuant to Section 40.9.3.6.1 or 40.9.3.6.2.

40.9.3.6.4 Resource Adequacy Obligation. To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40 applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be released from this obligation and the substitution requirements in Section 40.9 -

- (a) at the end of the approved substitution period; or
- (b) upon request by either the Scheduling Coordinator for the resource on Forced Outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in accordance with the process set forth in the Business Practice Manual.

40.9.3.6.5 Treatment of Unbid Capacity. If the Scheduling Coordinator for RA Substitute Capacity does not submit Bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO --

- (1) will treat the unbid capacity as unavailable for purposes of Section 40.9; and
- (2) will reflect that unavailability in the RAAIM availability calculation for the Resource Adequacy Resource providing the RA Substitute Capacity.

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40.9.4 Availability Assessment

- (a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on --
 - (1) the availability assessment of the resource's minimum daily availability of local and/or system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping Resource Adequacy commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;
 - (2) including the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage, except to the extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6, or the Forced Outage is excluded from RAAIM under Section 40.9.3.5;
 - (3) including the capacity, duration, and must-offer requirement for any RA Substitute Capacity, RA Replacement Capacity, or CPM Capacity the resource is committed to provide; and
 - (4) excluding the Maintenance Outages specified in Section 40.9.3.4.
- (b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly average availability.
- (c) If the resource is committed to provide local and/or system RA capacity and Flexible RA Capacity in a month, but does not provide both for the full month, the CAISO prorates the number of days that local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

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40.10.5 Flexible RA Capacity Plans

40.10.5.1 LSE Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly LSE Flexible RA Capacity Plans for each Load Serving Entity it represents.
- (b) **Annual Plan.** Each annual LSE Flexible RA Capacity Plan must -

- (1) demonstrate that the Load Serving Entity has procured for each month at least 90 percent of the annual Flexible RA Capacity requirement determined by the CAISO; or the amount of Flexible RA Capacity required by the Load Serving Entity's Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) identify the resources the Load Serving Entity intends to rely on to provide the Flexible RA Capacity, but need not identify the flexible resource adequacy categories; and
 - (3) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (c) **Monthly Plan.** The monthly LSE Flexible RA Capacity Plan must --
- (1) demonstrate that the Load Serving Entity procured 100 percent of the total monthly Flexible RA Capacity requirement determined by the CAISO; or the monthly amount of Flexible RA Capacity required by the Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) demonstrate that the Load Serving Entity met the total monthly requirement determined by the CAISO within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category; or only if the Local Regulatory Authority has established its own flexible capacity requirement, show that the Load Serving Entity has met the total monthly requirement determined by the Local Regulatory Authority within the minimum or maximum quantity for each Flexible Capacity Category required by the Local Regulatory Authority, if applicable;
 - (3) identify all resources the Load Serving Entity will rely on to provide the Flexible RA Capacity and for each resource specify the Flexible Capacity Category in which the Flexible RA Capacity will be provided; and
 - (4) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Load Serving Entity may

submit at any time from 45 days through 11 days in advance of the first day of the month covered by the plan, a revision to its monthly LSE Flexible RA Capacity Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly LSE Flexible RA Capacity Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

40.10.5.1.1 Load-Following MSS

- (1) Each Load-following MSS Load Serving Entity for which the CAISO has calculated an allocable share of the Flexible Capacity Need under Section 40.10.2.2 must submit annual and monthly LSE Flexible RA Capacity Plans pursuant to this Section 40.10.5.1 to identify the Flexible RA Capacity it is using to satisfy such requirement.
- (2) The Load-following MSS must increase the Flexible RA Capacity in its monthly plan by the MW amount of Capacity for a Variable Energy Resource that is initially shown as being included in the Load-following MSS Load Serving Entity's resource portfolio in the information required pursuant to Section 40.10.1.2, but is subsequently not included in the current MSS resource portfolio at the time the monthly LSE Flexible RA Capacity Plan is due for the applicable month.

40.10.5.2 Resource Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly Resource Flexible RA Capacity Plans for each resource it represents that provides Flexible RA Capacity; except that an annual plan is not required for 2015.
- (b) **Annual Plan.** The annual Resource Flexible RA Capacity Plan shall --
 - (1) verify the resource's agreement to provide Flexible RA Capacity during the next Resource Adequacy Compliance Year; and
 - (2) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (c) **Monthly Plan.** The monthly Resource Flexible RA Capacity Plan shall --
 - (1) verify the resource's agreement to provide Flexible RA Capacity during the month;

- (2) include an affirmative representation by the Scheduling Coordinator submitting the plan that the CAISO is entitled to rely on the accuracy of the information provided in the plan to perform those functions set forth in this Section 40; and
 - (3) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the resource may correct an error in the plan by submitting a revision to its monthly Resource Flexible RA Capacity Plan at any time from 45 days through 11 days in advance of the first day of the month covered by the plan. The CAISO will not accept any revisions to a monthly Resource Flexible RA Capacity Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

40.10.5.3 Review of Flexible RA Capacity Plans

- (a) **Validation For Deficiency In An Individual LSE Plan.**
- (1) If the Local Regulatory Authority has not established its own flexible capacity procurement requirements, the CAISO will validate the annual and monthly LSE Flexible RA Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities, and will use the Effective Flexible Capacity value for each resource calculated under Section 40.10.4. The CAISO will determine whether each Load Serving Entity met its annual or monthly total Flexible RA Capacity Requirement, and for the monthly LSE Flexible RA Capacity Plan, whether it met the total monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category.
 - (2) If the Local Regulatory Authority has established its own flexible capacity procurement requirements, the CAISO will not validate the individual LSE Flexible Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities.
- (b) **Identification of Discrepancy.** The CAISO will compare all LSE Flexible RA Capacity Plans and Resource Flexible RA Capacity Plans to identify any discrepancy in the Resource Adequacy

Resources listed or the amount of the Resource Adequacy Capacity committed.

(c) **Evaluation For Cumulative Deficiency.**

(1) The CAISO will evaluate the annual LSE Flexible RA Capacity Plans of all Load Serving Entities on a cumulative basis to determine whether the total amount of Flexible RA Capacity shown in the plans meets 90 percent of the annual Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(a).

(2) The CAISO will evaluate the monthly Flexible RA Capacity Plans of all Load Serving Entities to determine whether (i) the total amount of Flexible RA Capacity shown in the plans, limited to the maximum monthly requirement for each category, meets the applicable monthly Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(b)(1); or (ii) the total amount of Flexible RA Capacity shown in the base ramping Flexible Capacity Category in the plans meets the minimum monthly requirement for the base ramping Flexible Capacity Category determined by the CAISO pursuant to Section 40.10.1.5 or whether a cumulative deficiency may exist under Section 43.2.7(b)(2).

(d) **Calculation of Flexible RA Capacity.** The CAISO will calculate the amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans using the MW amount of Flexible RA Capacity for each resource designated in a plan as a Flexible RA Capacity Resource up to the Effective Flexible Capacity value for the resource calculated under Section 40.10.4.

(e) **Allocated Flexible RA Capacity Requirement.** The CAISO will calculate the Load Serving Entity's allocated annual and monthly Flexible RA Capacity Requirement --

(1) For Load Serving Entities within a Local Regulatory Authority that has not adopted its own allocation methodology, the CAISO will calculate the Load Serving Entity's allocated requirement based on the CAISO's allocation methodology set forth in Section 40.10.2.

(2) For Load Serving Entities within a Local Regulatory Authority that has adopted its own allocation methodology, the CAISO will use that Local Regulatory Authority's methodology for the Local Regulatory Authority's jurisdictional Load Serving Entities.

40.10.5.4 Deficiency in LSE Flexible RA Capacity Plan

- (a) **Finding and Notification.** If the CAISO's validation under Section 40.10.5.3(a) finds either (i) that the total amount of Flexible RA Capacity included in an annual or monthly LSE Flexible RA Capacity Plan is not sufficient to satisfy the Load Serving Entity's allocated Flexible RA Capacity Requirement or (ii) that the total monthly requirement in a monthly LSE Flexible RA Capacity Plan was not met within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, the CAISO will --
- (1) notify the relevant Scheduling Coordinator, and the Local Regulatory Authority or federal agency with jurisdiction over the relevant Load Serving Entity, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and
 - (2) provide the notice at least 25 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a deficiency exists.
- (b) **Resolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall -
- (1) demonstrate, no less than 11 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan, or
 - (2) advise the CAISO that the Load Serving Entity's Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.
- (c) **Unresolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.5 Discrepancy Between Flexible RA Capacity Plans.

- (a) **Finding and Notification.** If the CAISO's review under Section 40.10.5.3(b) finds a discrepancy between an LSE Flexible RA Capacity Plan and a Resource Flexible RA Capacity Plan, the CAISO will --

- (1) notify the relevant Scheduling Coordinators of the mismatch in an attempt to resolve the discrepancy in accordance with the procedures set forth in the Business Practice Manual; and
 - (2) provide the notice at least 25 days in advance of the first day of the month covered by the plans and include the reasons the CAISO believes a discrepancy exists.
- (b) **Resolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and the discrepancy is resolved, the Scheduling Coordinator must provide the CAISO with a revised LSE Flexible RA Capacity Plan or Resource Flexible RA Capacity Plan, as applicable, no less than 11 days prior to the first day of the month covered by the plans.
- (c) **Unresolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and is not advised that the discrepancy is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.6 LRA Deficiency.

- (a) **Finding and Notification.** If the CAISO's evaluation under Section 40.10.5.3(c) finds a cumulative deficiency in Flexible RA Capacity, the CAISO will --
- (1) identify each Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need using the cumulative amount of Flexible RA Capacity that the Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total and, for the monthly Flexible RA Capacity Plans, in each Flexible Capacity Category;
 - (2) identify each Load Serving Entity that (i) is subject to the jurisdiction of a Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need under Section 40.10.5.6, and (ii) did not include sufficient Flexible RA Capacity in an annual or monthly plan to meet its allocated Flexible RA Capacity Requirement or did not meet the monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, based on the allocation methodology of the Local

Regulatory Authority if it has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities;

- (3) notify each Local Regulatory Authority identified under Section 40.10.5.6(a)(1) and the Scheduling Coordinator for each Load Serving Entity identified under Section 40.10.5.6(a)(2) of the cumulative deficiency in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and
 - (4) provide the notice at least 25 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a cumulative deficiency exists.
- (b) **Resolved Deficiency.** If the CAISO provides a notice of cumulative deficiency under Section 40.10.5.6(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall demonstrate, no less than 11 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan.
- (c) **Unresolved Deficiency.** If the CAISO provides a notice of deficiency under Section 40.10.5.6(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

* * * *

43A.8.8 Allocation of Flexible Capacity CPM Costs

- (a) Calculation of Deficiency by LRA.
 - (1) The CAISO will determine whether each Local Regulatory Authority met its allocable share of the Flexible Capacity Need based on the cumulative amount of Flexible RA Capacity that Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total, and included in their monthly Flexible RA Capacity Plans for each Flexible Capacity Category.
 - (2) The CAISO will calculate the total amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans collectively for all Load Serving Entities within

the Local Regulatory Authority, and the total amount included in the monthly Flexible RA Capacity Plans for each Flexible Capacity Category using the minimum or maximum quantity, as applicable, for each category, and using the Effective Flexible Capacity value calculated under Section 40.10.4 for each resource designated in a plan as a Flexible RA Capacity Resource.

(b) **Allocation By CAISO Method.**

- (1) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, in total and in each Flexible Capacity Category, meets or exceeds the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, the CAISO will not allocate any of the Flexible Capacity CPM costs to the Scheduling Coordinators for those Load Serving Entities.
- (2) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, either in total or for a Flexible Capacity Category, is less than the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, and that Local Authority has not established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will allocate the Flexible Capacity CPM costs proportionately to the Scheduling Coordinator of each jurisdictional Load Serving Entity that failed to meet its procurement obligation.

- (c) **Allocation by Local Regulatory Authority Method.** If Load Serving Entities jurisdictional to a Local Regulatory Authority have a cumulative deficiency under Section 43A.8.8(a) and the Local Regulatory Authority has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will use the Local Regulatory Authority's methodology to allocate the Flexible Capacity CPM costs to the Scheduling Coordinator of each Load Serving Entity that is jurisdictional to that Local Regulatory Authority and that failed to meet its procurement obligation. If the Local Regulatory Authority does not notify the CAISO of its allocation method by the deadline established in the relevant Business

Practice Manual, then the CAISO allocates Flexible Capacity CPM costs using its default allocation methodology under Section 43A.8.8(b)(2).

(d) **Reduction of Cost Allocation.** If the CAISO issues a Flexible Capacity CPM designation, a Scheduling Coordinator for a Load Serving Entity that was deficient, but provided additional Flexible RA Capacity in a revised annual or monthly Flexible RA Capacity Plan consistent with the Market Notice under Section 43A.2.7.1 --

- (1) will be not be allocated a share of the Flexible Capacity CPM procurement costs if the additional Flexible RA Capacity included in that LSE's revised LSE Flexible RA Capacity Plan resolved the total deficiency of that Load Serving Entity; or
- (2) will be allocated a share of the Flexible Capacity CPM procurement costs on a proportionate basis to the extent that Load Serving Entity has a remaining partial deficiency.

* * * *

- Non-Specified RA Replacement Capacity

Capacity the Load Serving Entity procured that is capable of providing Resource Adequacy Capacity, but not designated as Resource Adequacy Capacity in the Load Serving Entity's monthly Resource Adequacy Plan for the month.

- RA Replacement Capacity

Specified RA Replacement Capacity, Non-Specified RA Replacement Capacity, or capacity that is not Resource Adequacy Capacity, CPM Capacity, or capacity under an RMR contract, that replaces Resource Adequacy Capacity that is not operationally available to the CAISO due to a Maintenance Outage, an RA Maintenance Outage With Replacement or a Forced Outage approved under Section 9.3.1.3.3.1(c)(4).

- Specified RA Replacement Capacity

RA Replacement Capacity specified by the Load Serving Entity to replace specific Resource Adequacy Capacity included in its monthly Resource Adequacy Plan, for all or a portion of the period that the

Resource Adequacy Capacity will not be operationally available to the CAISO during the month due to an Approved Maintenance Outage.

- System Total Available RA Capacity

The system total Resource Adequacy Capacity provided in the Resource Adequacy Plans, including the total MW of Specified RA Replacement Capacity accepted by the CAISO, less the total MW of unreplaced capacity in the Resource Adequacy Plans that is scheduled to take an Approved Maintenance Outage during the month.

Attachment B – Marked Tariff Records
Reliability Services Phase 1B and Phase 2 Tariff Amendment
California Independent System Operator Corporation

9.3.1 CAISO Outage Coordination Functions

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9.3.1.3 Coordinating ~~Maintenance~~ Outages of RA Resources

In performing outage coordination management under Section 9, and this Section 9.3.1.3, the CAISO may take into consideration the status of a Generating Unit as a Resource Adequacy Resource, including whether it is Listed Local RA Capacity. The CAISO may deny, reschedule or cancel an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid or Generating Units of Participating Generators if it determines that the outage is likely to have a detrimental effect on the availability of Resource Adequacy Capacity or the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

9.3.1.3.1 ~~[Not Used] Replacement Requirement for LSEs~~

~~9.3.1.3.1.1 LSE RA Plans~~

~~Each Scheduling Coordinator for a Load Serving Entity shall submit to the CAISO a monthly Resource Adequacy Plan that meets the requirements set forth in Sections 40.2.2.4 or 40.2.3.4, as applicable. Resource Adequacy Capacity included in the monthly Resource Adequacy Plan that, as of the due date for the plan, is scheduled to take an Approved Maintenance Outage during the period of designation may be subject to replacement. To the extent that a resource included in a monthly Resource Adequacy Plan as Resource Adequacy Capacity is scheduled to take an Approved Maintenance Outage for all or portion of its capacity during the resource adequacy month, the capacity scheduled for outage is not operationally available to the CAISO and may be required by the CAISO to be replaced with capacity from another resource(s) that is operationally available in the amount and for the duration of the scheduled outage during that month, as discussed in Sections 9.3.1.3.2.2 through 9.3.1.3.2.5.~~

~~9.3.1.3.1.2 RA Resource Pending Maintenance Outage Requests~~

~~If a Resource Adequacy Resource requested a planned Maintenance Outage, or change to an Approved Maintenance Outage, more than forty-five days prior to the first day of the resource adequacy month, but does not receive approval or denial of the request by the CAISO as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO, as part of the validation under Sections 9.3.1.3.2.3 and 40.7(b), will determine whether the outage should be approved and, if so, whether it must be replaced in~~

~~the Resource Adequacy Plan with capacity from another resource that is operationally available in the amount and for the duration of the scheduled outage during the month.~~

~~**9.3.1.3.1.3 — Optional List of Specified RA Replacement Capacity**~~

~~A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Specified RA Replacement Capacity for the CAISO's use as RA Replacement Capacity to replace specific Resource Adequacy Capacity identified by the Load Serving Entity that is in its Resource Adequacy Plan, and that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.2 and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Specified RA Replacement Capacity, the CAISO, in its discretion, will use the specified capacity as RA Replacement Capacity to automatically replace the identified Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days specified by the Load Serving Entity that the Resource Adequacy Resource is scheduled to take an Approved Maintenance Outage during the month. The Specified RA Replacement Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the specified capacity is used by the CAISO as RA Replacement Capacity as provided in Section 9.3.1.3.2.2. The list of Specified RA Replacement Capacity included with a monthly Resource Adequacy Plan shall:~~

- ~~(a) — Identify the resource being replaced,~~
- ~~(b) — Identify the resource that will provide the Specified RA Replacement Capacity, the MW amount and time period of the replacement, and other information as may be required in the Business Practice Manuals, and~~
- ~~(c) — Be submitted in the format required by the Business Practice Manual.~~

~~**9.3.1.3.1.4 — Optional List of Non-Specified RA Capacity**~~

~~A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Non-Specified RA Capacity for the CAISO's use as RA Replacement Capacity to replace Resource Adequacy Capacity included in that Load Serving Entity's monthly Resource Adequacy Plan that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.3, 9.3.1.3.2.4, and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to~~

~~include a list of Non-Specified RA Capacity in its Resource Adequacy Plan, the CAISO, in its discretion, will select capacity from the list and use the selected capacity as RA Replacement Capacity to automatically replace Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days on which the CAISO's validation of the plan determines that the designated capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month must be replaced. The listed Non-Specified RA Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the Non-Specified Capacity is selected by the CAISO and used as RA Replacement Capacity as provided in Section 9.3.1.3.2.4. The list of Non-Specified RA Capacity included with a monthly Resource Adequacy Plan shall:~~

- ~~(a) Rank each resource that has available Non-Specified RA Capacity in the order of use preferred by the Load Serving Entity;~~
- ~~(b) Provide the identity of the resource, the MW amount of available capacity, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual;~~
- ~~(c) Indicate the willingness of the Load Serving Entity to offer each resource that has available Non-Specified RA Capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A; and~~
- ~~(d) Be submitted in the format required by the Business Practice Manuals.~~

9.3.1.3.2 [Not Used] CAISO Replacement Determination For LSE RA Plans

~~9.3.1.3.2.1~~ Review of LSE RA Plans

~~The CAISO shall review each monthly Resource Adequacy Plan pursuant to Section 40.7(b) to validate that the capacity provided is equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for the Load Serving Entity and shall provide the results of this review to the Local Regulatory Authority. Additionally, the CAISO will review each monthly Resource Adequacy Plan to identify any Resource Adequacy Capacity included in the plan that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month.~~

~~9.3.1.3.2.2~~ Replacement By Specified RA Replacement Capacity

~~If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes no capacity that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, no replacement by Specified RA Replacement Capacity will occur. If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes capacity that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, and the Load Serving Entity has provided a list of Specified RA Replacement Capacity, then the CAISO will verify that the Specified RA Replacement Capacity is available during the specified replacement period and will replace the unavailable capacity in that Load Serving Entity's Resource Adequacy Plan with the available Specified RA Replacement Capacity. The CAISO will not accept any Specified RA Replacement Capacity that is unavailable during the specified replacement period. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity that the Specified RA Replacement Capacity has been accepted as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity must verify their agreement to provide the Specified RA Replacement Capacity. For the duration of the period that the resource is providing Specified RA Replacement Capacity, the resource shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6, and the standard capacity product provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.~~

9.3.1.3.2.3 — CAISO Replacement Determination

~~Following replacement by Specified RA Replacement Capacity, the CAISO will determine whether Load Serving Entities are required to replace any capacity remaining in their monthly Resource Adequacy Plans that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month. The CAISO will make the replacement determination as follows:~~

- ~~(a) — For each day of the month, the CAISO will calculate the System Total Available RA Capacity provided in the Resource Adequacy Plans and compare that MW amount to the~~

~~CAISO system RA Reliability Margin.~~

- ~~(b) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans exceeds the CAISO system RA Reliability Margin, the CAISO may determine that no further replacement is required.~~
- ~~(c) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans is less than the CAISO system RA Reliability Margin, the CAISO may require replacement of the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, as provided in Sections 9.3.1.3.2.3 and 9.3.1.3.2.4. When replacement is required, the Scheduling Coordinator for each Load Serving Entity that did not include in its Resource Adequacy Plan available Resource Adequacy Capacity for the day in a MW amount equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for that Load Serving Entity will be required to provide the RA Replacement Capacity.~~
- ~~(d) When replacement is required under Section 9.3.1.3.2.3(c), the CAISO will consider whether the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage requires replacement in the reverse order of the dates on which the outage requests were received. The Resource Adequacy Capacity subject to the most recently requested Approved Maintenance Outages will require replacement before the Resource Adequacy Capacity subject to Approved Maintenance Outages that were requested on earlier dates. Any request for a change to an Approved Maintenance Outage that extends the scheduled duration of the outage or increases the MW amount of capacity on outage will be treated as a new outage request.~~
- ~~(e) Beginning with the date of the most recent request to take an Approved Maintenance Outage during the month, the CAISO will either replace the unavailable Resource Adequacy Capacity with Non-Specified RA Replacement Capacity under Section 9.3.1.3.2.4, or will require the Scheduling Coordinator for the Load Serving Entity to replace the unavailable Resource Adequacy Capacity under Section 9.3.1.3.2.5. The CAISO will continue this replacement process in reverse order of the dates on which the~~

~~requests to take the Approved Maintenance Outages were received until sufficient unavailable Resource Adequacy Capacity has been replaced each day to meet the criteria set forth in Section 9.3.1.3.2.3(b).~~

9.3.1.3.2.4 — Replacement By Non-Specified RA Replacement Capacity

~~For each day of the month where the CAISO determines under Section 9.3.1.3.2.3 that replacement is required of Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, the CAISO may replace the unavailable capacity with Non-Specified RA Replacement Capacity as follows:~~

- ~~(a) — The CAISO will identify each Load Serving Entity that did not include in its monthly Resource Adequacy Plan available Resource Adequacy Capacity for each day in a MW amount equal to or greater than its applicable forecasted monthly Demand Reserve Margin, and will verify whether each such Load Serving Entity provided a list of Non-Specified RA Replacement Capacity with its plan.~~
- ~~(b) — To the extent that a Load Serving Entity provided a list of Non-Specified Replacement Capacity, the CAISO during the replacement process set forth in Section 9.3.1.3.2.3 will select capacity, in its discretion, from the list and use the selected capacity as RA Replacement Capacity to automatically replace unavailable Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan for each day where the CAISO determines that replacement is required.~~
- ~~(c) — The CAISO will verify whether the Non-Specified RA Replacement Capacity on each list is available during the replacement period and replace the unavailable capacity in the Resource Adequacy Plan with available Non-Specified RA Replacement Capacity. The CAISO will not accept Non-Specified RA Replacement Capacity that is unavailable during the replacement period.~~
- ~~(d) — The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and the Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity that the Non-Specified RA Replacement Capacity has been selected as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity must verify its agreement to provide the Non-~~

~~Specified RA Replacement Capacity.~~

~~(e) For the duration of the period that the Non-Specified RA Capacity is providing RA Replacement Capacity, it shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the standard capacity product provisions in Section 40.9 for the MW amount and duration of the replacement period, which includes the full day of the start date and the full day of the end date of the outage.~~

~~9.3.1.3.2.5~~ **Unreplaced Capacity In An RA Plan**

~~Following replacement by Non-Specified Capacity, for each day of the month where the criteria set forth in Section 9.3.1.3.2.3(b) is not met, and where the Load-Serving Entity either did not provide Non-Specified RA Replacement Capacity, or the Non-Specified RA Replacement Capacity it provided was already selected by the CAISO, was insufficient, or was unavailable during the replacement period, the Scheduling Coordinator for the Load-Serving Entity will have a replacement requirement. The CAISO will notify the Scheduling Coordinator for the Load-Serving Entity of the replacement requirement and will identify the MW amount of capacity remaining in its Resource Adequacy Plan that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage on that day and that it is required to replace. The CAISO will treat the unreplaced capacity as an outage replacement requirement pursuant to Section 40.7(b). If the Scheduling Coordinator for the Load-Serving Entity does not provide sufficient operationally available RA Replacement Capacity to meet the replacement requirement identified by the CAISO, and the resource does not reschedule or cancel the outage after its Supply Plan is submitted, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A.~~

9.3.1.3.3 **Substitution Opportunity Replacement Requirement for RA Resources**

To the extent that a resource is committed to provide Resource Adequacy Capacity during a month, the Scheduling Coordinator for the resource may request an RA Maintenance Outage With Substitution Replacement, RA Maintenance Outage Without Substitution Replacement, Off Peak Opportunity RA Maintenance Outage, or Short-Notice Opportunity RA Outage, or may request to reschedule an Approved

Maintenance Outage, for that Resource Adequacy Capacity in accordance with the provisions of this Section. The timelines set forth in this Section for submitting an Outage request and classifying the outage as a Maintenance Outage or a Forced Outage exclude the day that the request is submitted and the day that the outage is scheduled to commence.

9.3.1.3.3.1 RA Maintenance Outage With SubstitutionReplacement

- (a) **SubstitutionReplacement Option.** The Scheduling Coordinator of a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a planned Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage With SubstitutionReplacement during that month.
- (b) **Request.** A request for an RA Maintenance Outage With SubstitutionReplacement must: (i) be submitted to the CAISO ~~no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and~~ no less than eight (8) days prior to the start of the outage; (ii) provide RA SubstitutionReplacement Capacity in an amount no less than the amount of Resource Adequacy Capacity ~~designated for the resource for the duration of the that would be on~~ scheduled outage; and (iii) otherwise comply with the requirements set forth in Section 9.
- (c) **Approval.**
- (1) The CAISO will consider requests for an RA Maintenance Outage With SubstitutionReplacement in the order that the requests are received.
 - (2) The CAISO may approve the request for an RA Maintenance Outage With SubstitutionReplacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.1(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.
 - (3) If the request was submitted ~~no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and~~ no less than eight (8) days prior to the start date for the outage, and it meets the requirements in Section 9.3.1.3.3.1(c)(2) the CAISO may approve the request as an RA Maintenance Outage

With ~~Substitution~~Replacement.

(4) If the CAISO denies the request for failing to meet the requirements in Section 9.3.1.3.3.1(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request a different schedule for the RA Maintenance Outage With ~~Substitution~~Replacement or may request that the CAISO accommodate the outage without RA ~~Substitute~~Replacement Capacity at another time.

(d) **Resource Adequacy Obligation.** The RA ~~Substitute~~ Replacement Capacity for an RA Maintenance Outage With ~~Substitution~~Replacement approved under Section 9.3.1.3.3.1(c)(3) shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAIM provisions in Section 40.9, for the MW amount and duration of the outage ~~substitution~~replacement period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.3.2 RA Maintenance Outage Without ~~Substitution~~Replacement

(a) **Option for No ~~Substitution~~Replacement.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage Without ~~Substitution~~Replacement, without a requirement to provide RA ~~Substitute~~Replacement Capacity for the unavailable capacity for the duration of the outage to be excluded from the RAIM calculation under Section 40.9.

(b) **Request.** A request for an RA Maintenance Outage Without ~~Substitution~~Replacement must: (i) be submitted to the CAISO ~~no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and~~ no less than eight (8) days prior to the start date of the outage; and (ii) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider requests received for an RA Maintenance Outage Without ~~Substitution~~Replacement in the order the requests were received.

(2) The CAISO may approve a request for an RA Maintenance Outage Without

~~Substitution~~Replacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.2(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The analysis of system conditions and the overall outage schedule will include Approved Maintenance Outage requests that were received before and after the request for an RA Maintenance Outage Without ~~Substitution~~Replacement.

- (3) The CAISO will not approve a request for an RA Maintenance Outage Without ~~Substitution~~Replacement earlier than seven days before the first day of the resource adequacy month, and may hold the request as pending until system conditions are sufficiently known for the CAISO to determine whether the outage meets the requirements in Section 9.3.1.3.3.2(c)(2).
- (4) If the CAISO denies a request for an RA Maintenance Outage Without ~~Substitution~~Replacement for failing to meet the requirements in Section 9.3.1.3.3.2(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage ~~W~~with ~~Substitution~~Replacement or may request that the CAISO accommodate the outage at another time.

9.3.1.3.3.3 Off-Peak Opportunity RA Maintenance Outage

- (a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA ~~Substitute~~Replacement Capacity for the unavailable capacity for the duration of the outage to be excluded from the RAAIM calculation under Section 40.9.
- (b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must: (i) be submitted to the CAISO ~~no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and~~ no less than eight (8) days prior to the start date for the outage; (ii) schedule the outage to begin during off-peak hours (as specified in the Business

Practice Manuals) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manuals) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manuals) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

- (1) The CAISO will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.
- (2) If the request was submitted ~~no more than forty five days prior to the first day of the resource adequacy month that the outage is requested for, and~~ no less than eight (8) days prior to the start date for the outage, the CAISO may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that: (i) the request meets the requirements set forth in Section 9.3.1.3.3.3(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.
- (3) If the CAISO denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.3.3(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage ~~w~~With Substitution~~Replacement~~ or may request that the CAISO accommodate the outage at another time.
- (4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

9.3.1.3.3.4 Short-Notice Opportunity RA Outage

- (a) **Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy

Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide ~~RA Replacement Capacity or~~ RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage ~~or de-rate~~ to be excluded from the RAIM calculation under Section 40.9.

- (b) A Short-Notice Opportunity RA Outage shall not exceed five days in length. The request for a Short-Notice Opportunity RA Outage must: (i) be submitted no more than seven (7) days prior to the requested start date for the outage; (ii) provide the CAISO adequate time to analyze the request before the outage begins; (iii) be submitted before the outage has commenced as a Forced Outage; and (iv) otherwise comply with the requirements of Section 9.
- (c) **Approval.**
- (1) The CAISO will consider Short-Notice Opportunity RA Outages in the order the requests are received.
 - (2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO may approve the request as a Short Notice Opportunity RA Outage if it determines that: (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will not be subject to the RAIM provisions in Section 40.9.
 - (3) If the request was submitted three days or less prior to the start date of the outage, the CAISO may approve the request as a Forced Outage if it determines that: (i) the outage and request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; (iii) the outage will not result in insufficient available Resource

Adequacy Capacity during the outage period; and (iv) the repairs are necessary to maintain system or resource reliability and require immediate attention to prevent equipment damage or failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage ~~but it~~and will not be subject to the RAIM provisions in Section 40.9.

- (4) To the extent that an approved Short-Notice Opportunity RA Outage is not completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the RAIM provisions in Section 40.9.

9.3.1.3.4 Outage Reporting for Resource Adequacy Resources between 1 MW and 10 MW Replacement Requirement Information

~~Scheduling Coordinators or Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10 shall report Outages in accordance with the process set forth in the Business Practice Manual. In order to make information available to Market Participants pertinent to the replacement requirement provisions in Section 9.3.1.3, the CAISO will:~~

- ~~(a) Annually post on the CAISO Website a calendar of the timeline of due dates for each month of the following resource adequacy compliance year; and~~
- ~~(b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity and Non-Designated RA Capacity that may be needed or available as RA Replacement Capacity in the bilateral market. Use of the bulletin board is voluntary and limited to use for informational purposes only.~~

* * * *

40.1 Applicability

A Load Serving Entity, and its Scheduling Coordinator, shall be exempt from this Section 40 during the next Resource Adequacy Compliance Year, if the metered peak Demand of the Load Serving Entity did not exceed one (1) MW during the twelve months preceding October 1 of the year preceding the Resource Adequacy Compliance Year in question~~the last date on which the Load Serving Entity can make the election in Section 40.1.1 for the next Resource Adequacy Compliance Year~~. This Section 40 shall apply to all other Load Serving Entities and their respective Scheduling Coordinators. For purposes of Section 40, a Load Serving Entity shall not include any entity satisfying the terms of California Public Utilities Code Section 380(j)(3).

* * * *

40.2.1 Requirements for CPUC Reserve Sharing Load Serving Entities

~~40.2.1.1~~ Requirements for CPUC Load Serving Entities

- (a) The Scheduling Coordinator for a CPUC Load Serving Entity must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, except that the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no less than 45 days in advance of the first day of the month covered by the plan, as provided in Section 40.2.1.1(e).
- (b) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1(b) shall apply.
- (c) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity, then the provisions of Section 40.8 shall apply.
- (d) Where the information or data provided to the CAISO under Section 40.2.1.1(a)

does not include annual and monthly Demand Forecast requirements, then the provisions of Section 40.2.2.3 shall apply.

- (e) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Resource Adequacy Plan requirements that include, at a minimum, identifying Local Capacity Area Resources and Listed Local RA Capacity, or where there is a requirement to submit monthly Resource Adequacy Plans but the submission date is less than 45 days in advance of the first day of the month covered by the plan, then Section 40.2.2.4 shall apply.

* * * *

40.2.2 Non-CPUC Load Serving Entities

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40.2.2.3 Demand Forecasts

If the California Energy Commission does not produce a coincident peak Demand Forecast for a Load Serving Entity, the Scheduling Coordinator for that Load Serving Entity must provide the information requested by the CAISO on the schedule and in the reporting format(s) set forth in the Business Practice Manual.

40.2.2.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity, as follows:

- (a) Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity as described in Section 40.3, and may identify a Local Capacity Area Resource as Listed Local RA Capacity.
- (b) Each monthly Resource Adequacy Plan or the same information as required to be

included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual. The monthly Resource Adequacy Plan must identify all resources, including Local Capacity Area Resources, the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving Entity as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3 and applicable Reserve Margin. For each Local Capacity Area Resource identified on the monthly Resource Adequacy Plan, the Load Serving Entity also may identify RA Capacity from such resource as Listed Local RA Capacity. Resource Adequacy Plans must utilize the Net Qualifying Capacity requirements of Section 40.4. A Load Serving Entity is not obligated to commit a type of RA capacity on a monthly Resource Adequacy Plan if it holds a monthly obligation of less than 1 MW for that type of RA capacity but is not exempt from committing any other type of RA capacity for that month for which it holds a monthly obligation of 1 MW or greater and is not exempt for any relevant cost allocation from a CPM designation made pursuant to Section 43A associated with a monthly RA capacity obligation of less than 1 MW.

- (c) The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through ~~3014~~ days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct either: (i) (i) a discrepancy between its monthly Resource Adequacy Plan and the monthly Supply Plan of a Resource Adequacy Resource providing that Load Serving Entity with Resource Adequacy Capacity, as provided in Section 40.7(b); or (ii) a deficiency in how much Resource Adequacy Capacity was provided on the monthly Resource Adequacy Plan~~an error in the plan~~. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from ~~3010~~ days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the

change and explains why it was not possible to submit the change earlier.

- (d) ~~In order to ensure that the CAISO's outage replacement determination remains accurate,~~
~~¶~~The Scheduling Coordinator for the Load Serving Entity that submits a revision to its monthly Resource Adequacy Plan to correct ~~an error~~ a deficiency or discrepancy must include in the revision a MW amount of Resource Adequacy Capacity for each day of the month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.
- ~~(e) — In order to ensure that the amount of Resource Adequacy Capacity required to be included in the Load Serving Entity's Resource Adequacy Plan is operationally available to the CAISO throughout the resource adequacy month, the Load Serving Entity that submits the monthly Resource Adequacy Plan is subject to the replacement requirement in Section 9.3.1.3.1.~~

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40.3.2 Allocation of Local Capacity Area Resource Obligations

The CAISO will allocate ~~responsibility for~~ Local Capacity Area Resources requirements to Scheduling Coordinators for Load Serving Entities in the following sequential manner:

- (a) The responsibility for the aggregate Local Capacity Area Resources required for all Local Capacity Areas within each TAC Area as determined by the Local Capacity Technical Study will be allocated to all Scheduling Coordinators for Load Serving Entities that serve Load in the TAC Area in accordance with the Load Serving Entity's proportionate share of the LSE's TAC Area Load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak Demand Forecast for the next Resource Adequacy Compliance Year as determined by the California Energy Commission. Expressed as a formula, the allocation of Local Area Capacity Resource obligations will be as follows: (\sum Local Capacity Area MW in TAC Area from the Local Capacity Technical Study) *

(LSE Demand in TAC Area at CAISO annual coincident peak Demand)/(Total TAC Area Demand at the time of CAISO annual coincident peak Demand). This will result in a MW responsibility for each Load Serving Entity for each TAC Area in which the LSE serves Load. In no instance, however, is a Load Serving Entity obligated to commit, on a monthly Resource Adequacy Plan, Local Capacity Area Resources in a particular TAC Area in excess of the quantity of capacity needed by that Load Serving Entity to meet its applicable Demand and Reserve Margin requirements for the applicable compliance month. If the CAISO determines that a Load Serving Entity would have an obligation to show Local Capacity Area Resources of less than 1 MW in a particular TAC Area, then the Load Serving Entity will have an obligation of zero (0) MWs for that TAC Area in that year. The LSE may meet its MW responsibility, as assigned under this Section, for each TAC Area in which the LSE serves Load by procurement of that MW quantity in any Local Capacity Area in the TAC Area.

- (b) For Scheduling Coordinators for Non-CPUC Load Serving Entities, the Local Capacity Area Resource obligation will be allocated based on Section 40.3.2(a) above.
- (c) For Scheduling Coordinators for CPUC Load Serving Entities, the CAISO will allocate the Local Capacity Area Resource obligation based on an allocation methodology, if any, adopted by the CPUC. However, if the allocation methodology adopted by the CPUC does not fully allocate the total sum of each CPUC Load Serving Entity's proportionate share calculated under Section 40.3.2(a), the CAISO will allocate the difference to all Scheduling Coordinators for CPUC Load Serving Entities in accordance with their proportionate share calculated under 40.3.2(a). If the CPUC does not adopt an allocation methodology, the CAISO will allocate Local Capacity Area Resources to Scheduling Coordinators for CPUC Load Serving Entities based on Section 40.3.2(a).

Once the CAISO has allocated the total responsibility for Local Capacity Area Resources, the CAISO will inform the Scheduling Coordinator for each LSE of the LSE's specific allocated responsibility for Local Capacity Area Resources in each TAC Area in which the LSE serves Load.

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40.4.47 Submission of Supply Plans

40.4.7.1 Schedule for Submission of Supply Plans

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with annual and monthly Supply Plans, as follows:

- (a) The annual Supply Plan shall be submitted to the CAISO on the schedule set forth in the Business Practice Manual and shall verify their agreement to provide Resource Adequacy Capacity during the next Resource Adequacy Compliance Year. The annual Supply Plan may identify a Local Capacity Area Resource as Listed Local RA Capacity.
- (b) The monthly Supply Plans or the same information as required to be included in the monthly Supply Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual, and shall verify their agreement to provide Resource Adequacy Capacity during that resource adequacy month. The monthly Supply Plan may identify a Local Capacity Area Resource as Listed Local RA Capacity.
- (c) The Scheduling Coordinator for the Resource Adequacy Resource may submit, at any time from 45 days through ~~30~~44 days in advance of the relevant month, a revision to its monthly Supply Plan to correct a discrepancy between its monthly Supply Plan and a Resource Adequacy Plan of a Load Serving Entity for which that Resource Adequacy Resource is providing Resource Adequacy Capacity, as provided in Section 40.7(b)~~an error in the plan~~. The CAISO will not accept any revisions to a monthly Supply Plan from

~~3040~~ days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource Adequacy Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

~~(d) The monthly Supply Plan may indicate the willingness of the resource to offer capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43, and provide the identity of the resource, the available capacity amount, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual.~~

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40.7 Compliance

The CAISO will evaluate Resource Adequacy Plans and Supply Plans as follows:

- (a) The CAISO will evaluate whether each annual and monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates Resource Adequacy Capacity sufficient to satisfy the Load Serving Entity's (i) allocated responsibility for Local Capacity Area Resources under Section 40.3.2 and (ii) applicable Demand and Reserve Margin requirements. The CAISO will evaluate compliance with the responsibility for demonstrating Local Capacity Area Resources in two phases. Phase 1 of the Local Capacity Area Resource sufficiency evaluation will be made without regard to capacity's identification as Listed Local RA Capacity. Phase 2 of the Local Capacity Area Resource sufficiency evaluation will consider capacity to be a Local Capacity Area Resource only if it is also Listed Local RA Capacity. If the CAISO determines through the Phase 1 analysis that a Resource Adequacy Plan does not demonstrate Local Capacity Area Resources sufficient to meet its allocated responsibility under Section 40.3.2, compliance with applicable Demand and Reserve Margin requirements, or compliance with any other resource adequacy requirement in this Section 40 or adopted by the CPUC, Local Regulatory Authority, or federal agency, as

applicable, then the CAISO will notify the relevant Scheduling Coordinator, CPUC, Local Regulatory Authority, or federal agency with jurisdiction over the relevant Load Serving Entity, or in the case of a discrepancy mismatch between Resource Adequacy Plan(s) and Supply Plan(s), the relevant Scheduling Coordinators, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual. The notification will be made at least 4025 days in advance of the first day of the month covered by the plan and will include the reasons the CAISO believes a deficiency exists. If the deficiency relates to the demonstration of Local Capacity Area Resources in a Load Serving Entity's annual Resource Adequacy Plan, and the CAISO does not provide a written notice of resolution of the deficiency as set forth in the Business Practice Manual, the Scheduling Coordinator for the Load Serving Entity may demonstrate that the identified deficiency is cured by submitting a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year. For all other identified deficiencies, other than an insufficiency identified through Phase 2 of the Local Capacity Area Resource sufficiency evaluation, at least 30ten (10) days prior to the effective month of the relevant Resource Adequacy Plan, the Scheduling Coordinator for the Load Serving Entity shall: (i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan; or (ii) advise the CAISO that the CPUC, Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists. If, after providing any needed opportunity to resolve identified discrepancies as required by Section 40.7(b), the CAISO identifies an insufficiency through Phase 2 of the Local Capacity Area Resource sufficiency evaluation, then the CAISO may notify the relevant Local Regulatory Authority of the insufficiency.

~~(b) The CAISO will evaluate whether each monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates operationally available Resource Adequacy Capacity, excluding capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month, that is equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and~~

~~Reserve Margin. For each day of the month where the CAISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, if a monthly Resource Adequacy Plan (i) includes capacity scheduled to take an Approved Maintenance Outage on that day that has not been replaced pursuant to Sections 9.3.1.3.1, or 9.3.1.3.2, and (ii) does not demonstrate operationally available Resource Adequacy Capacity equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin, the CAISO will require outage replacement and will provide notice of the outage replacement requirement to the Local Regulatory Authority, the Scheduling Coordinator for the Load Serving Entity, and the Scheduling Coordinator for the Resource Adequacy Resource scheduled to take the Approved Maintenance Outage. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons why the CAISO believes an outage replacement requirement exists. At least eleven (11) days prior to the resource adequacy month, the Scheduling Coordinator for either the Load Serving Entity or the Resource Adequacy Resource may demonstrate that the identified outage replacement requirement is cured by submitting to the CAISO a revision or update to the monthly Resource Adequacy Plan or Supply Plan, as applicable. If neither the Scheduling Coordinator for the Load Serving Entity nor the Scheduling Coordinator for the Resource Adequacy Resource timely advises the CAISO that the identified outage replacement requirement is cured, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43.~~

- (be) In the case of a ~~discrepancy mismatch~~ between Resource Adequacy Plan(s) and Supply Plan(s), if resolved, the relevant Scheduling Coordinator(s) must provide the CAISO with revised Resource Adequacy Plan(s) or Supply Plans, as applicable, at least ~~30~~^{ten (10)} days prior to the effective month. If the CAISO is not advised that the deficiency or ~~discrepancy mismatch~~ is resolved at least ~~30~~^{ten (10)} days prior to the effective month, the CAISO will use the information contained in the Supply Plan to set the obligations of Resource Adequacy Resources under this Section 40 and/or to assign any costs incurred

under this Section 40 and Section 43A.

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40.9.3 Availability Assessment

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40.9.3.4 Treatment of ~~Maintenance~~ Outages

- (a) **RA Substitute Capacity Replacement Not Required.** The RAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity ~~—~~
- ~~(1) with an Approved Maintenance Outage or pending request for a Maintenance Outage as of 45 days prior to the start date of the Resource Adequacy month; however any subsequent incremental increase in the MWs or duration of the outage will be subject to RAIM unless RA Replacement Capacity for the incremental outage is required and provided or is not required; or~~
- ~~(2) on an Approved Maintenance Outage during the Resource Adequacy month that does not require RA Substitution Replacement Capacity under Section 9.3.1.3.3.~~
- (b) **RA Substitute Capacity Required and Replacement Requirement Provided.** For each ~~Maintenance Outage that a Resource Adequacy Resource requests less than 45 days prior to the start of the relevant resource adequacy month and that~~ requires RA Substitute Replacement Capacity under Section 40.9.3.6 to avoid imposition of RAIM charges ~~—~~
- (1) the RAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on ~~an Approved Maintenance~~ Outage to the extent the resource provides RA Substitute Replacement Capacity for that outage as required under Section ~~40.9.3.6~~ 9.3.1.3.3; and
- (2) the RAIM Availability Assessment for the substitute replacement resource includes the capacity, duration, and must-offer requirement for the RA Substitute Replacement Capacity commitment. For each day the substitute resource is committed to provide

Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement. For the purposes of this Section 40.9, base ramping resources (as defined in section 40.10.3.2) are considered to be a higher quality of Flexible Capacity Category than either peak ramping resources (as defined in section 40.10.3.3) or super-peak ramping resources (as defined in section 40.10.3.4). Additionally, peak ramping resources (as defined in section 40.10.3.3) are considered to be a higher quality of Flexible Capacity Category than super-peak ramping resources (as defined in section 40.10.3.4).

- (c) **RA Substitute Capacity Required**~~Replacement Requirement~~ **Not Provided.** For each ~~Maintenance~~ Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAIM charges, a Resource Adequacy Resource requests less than 45 days prior to ~~the start of the relevant resource adequacy month,~~ the RAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an ~~Approved Maintenance~~ ~~O~~ outage to the extent the resource does not provide RA ~~Substitute~~ ~~Replacement~~ Capacity for the outage as required under Section ~~40.9.3.6~~ ~~3.1.3.3~~.
- (d) **Exclusions from RAIM for certain Forced Outage types.** The RAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.
- (e) **Derates on Generating Units Providing system RA Capacity and Listed Local RA Capacity.** If a Generating Unit providing both system RA Capacity and Listed Local RA Capacity is on Forced Outage, then for purposes of RAIM and RA Substitute Capacity the quantity of the Forced Outage will be apportioned first to the system RA Capacity provided from that Generating Unit. If the quantity of the Forced Outage exceeds the quantity of system RA Capacity provided

by the Generating Unit, then the remainder of the Forced Outage shall be apportioned to the Listed Local RA Capacity provided by the Generating Unit.

40.9.3.5 ~~[Not Used]~~ Treatment of Forced Outages

~~(a) RA Substitute Capacity – Local And System~~

~~(1) The RAAIM Availability Assessment for a Resource Adequacy Resource includes the capacity, duration, and must offer requirement for Resource Adequacy Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6.~~

~~(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must offer requirement for the RA Substitute Capacity.~~

~~(b) RA Substitute Capacity – Flexible~~

~~(1) The RAAIM Availability Assessment for a Flexible RA Resource includes the capacity, duration, and must offer requirement for Flexible RA Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for that outage in accordance with Section 40.9.3.6.~~

~~(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must offer requirement for the RA Substitute Capacity.~~

~~(3) For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement.~~

~~(c) Exclusions from RAAIM.~~ ~~The RAAIM Availability Assessment excludes the capacity, duration, and must offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short term use limitation, as those categories are specified in the Business Practice Manual.~~

~~(d) Scheduling Coordinators for Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages~~

~~in accordance with Section 9.3.10 shall report outages and de-rates in accordance with the process set forth in the Business Practice Manual.~~

40.9.3.6 Substitute Capacity

40.9.3.6.1 CAISO Evaluation by T-22 of Need for Substitute Capacity for Outages Submitted by T-25

No later than 22 days before the start of each month, the CAISO will determine for each day in that month whether it will have sufficient operationally available RA Capacity from a combination of Local Capacity Area Resources and system capacity resources to meet or exceed the CAISO system RA Reliability Margin for each day. The CAISO will base this assessment [A4] on Maintenance Outages planned to be taken during the month that were submitted at least 25 days before the start of the month and any RA Substitute Capacity already provided to the CAISO for that month.

If the CAISO determines that it will have sufficient operationally available RA Capacity to meet or exceed the CAISO system RA Reliability Margin for a particular day, then no supplier with an outage submitted at least 25 days before the start of the month would be required to provide RA Substitute Capacity to be excluded from the RAIM calculation as part of the analysis conducted no later than 22 days before the start of each month.

If the CAISO determines that it will not have sufficient operationally available RA capacity to meet the CAISO system RA Reliability Margin for a particular day, then it will determine which resources must provide RA Substitute Capacity to be excluded from the RAIM calculation based on the reverse order of the dates on which the resources submitted the outage requests to the CAISO. The CAISO will first request the resource providing RA Capacity with the most-recently-requested outage for that day to provide RA Substitute Capacity and then will continue to assign substitution opportunities until the CAISO has sufficient operationally available RA Capacity to meet the CAISO system RA Reliability Margin for that particular day, assuming that all resources that are assigned a RA Substitute Capacity obligation actually provide RA Substitute Capacity for that day.

For purposes of this section 40.9.3.6.1, the CAISO will treat any request to extend the scheduled duration of an outage or increase the MW amount of capacity on outage as a new outage request and will assign a new priority date based on when the request to change the outage or derate was submitted to the CAISO.

For the purposes of this section 40.9.3.6.1, the CAISO will not assign a new priority date where the Scheduling Coordinator requests to reduce the scheduled duration of an outage or decrease the MW amount of capacity on outage.

A resource designated to provide RA Substitute Capacity as part of the analysis conducted no later than 22 days before the start of each month must designate RA Substitute Capacity by the deadline specified in the relevant Business Practice Manual. Failure to designate the RA Substitute Capacity by the specified deadline will subject the resource to RAIM unless the outage is cancelled or rescheduled.

40.3.6.2 CAISO Rolling Evaluation of Need for Substitute Capacity for Outages Submitted after T-25

Starting at twenty-four days before the start of a month, the CAISO will consider submitted Maintenance Outages for a substitution requirement on a rolling basis, based on time of submission. Upon submission of the outage request, the CAISO will determine for each day of the outage whether the CAISO will have sufficient operationally available RA Capacity from a combination of Local Capacity Area Resources and system capacity resources to meet or exceed the CAISO system RA Reliability Margin for each day. The CAISO will base this assessment on Maintenance Outages planned to be taken for that day and any RA Substitute Capacity already provided to the CAISO for that day.

If the CAISO determines that it will have sufficient operationally available RA Capacity to meet or exceed the CAISO system RA Reliability Margin for a particular day, then the supplier will not be required to provide RA Substitute Capacity for that day to avoid imposition of RAIM.

If the CAISO determines that it will not have sufficient operationally available RA capacity to meet the CAISO system RA Reliability Margin for a particular day, then it will request substitution for the resource for that day. Failure to designate RA Substitute Capacity by the deadline specified in the relevant Business Practice Manual will subject the resource to RAIM unless the outage is cancelled or rescheduled.

The CAISO will not conduct an assessment to determine the need to provide RA Substitute Capacity for Forced Outages. Any such outage, irrespective of whether the resource is providing RA Capacity or Flexible RA Capacity, will be subject to applicable RAIM unless the Scheduling Coordinator for the resource provides Substitute Capacity by the deadline specified in the relevant Business Practice Manual.

the outage is exempt from RAAIM as set forth in Section 9 or Section 40, the outage is cancelled, or the outage is rescheduled.

For purposes of this section 40.9.3.6.2, the CAISO will treat any request to extend the scheduled duration of an outage or increase the MW amount of capacity on outage as a new outage request and will assign a new priority date based on when the request to change the outage or derate was submitted to the CAISO.

For purposes of this section 40.9.3.6.2, the CAISO will reevaluate the need for a Scheduling Coordinator to provide RA Substitute Capacity where the Scheduling Coordinator requests to reduce the scheduled duration of an outage or decrease the MW amount of capacity on outage but will not assign a new priority date.

40.9.3.6.3 General Provisions on Substitute Capacity

(a) Substitution

- (1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on ~~a Forced Outage or de-rate~~. Certain types of Outages, as defined elsewhere in Section 9 or Section 40, will not subject the Scheduling Coordinator for a Resource Adequacy Resource to RAAIM if it declines to provide RA Substitute Capacity.
- (2) If the Resource Adequacy Resource on ~~e~~Outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) Availability

- (1) RA Substitute Capacity must be operationally available to the CAISO:
- (2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.
- (3) ~~RA Replacement Capacity~~, RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.

- (4) RA Substitute Capacity shall not qualify to be ~~RA Replacement Capacity~~, RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.
- (5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.63, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.
- (6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

- (1) **Day-Ahead Market.** Requests for substitution for Forced Outages in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution for Forced Outages in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.
- (2) **Real-Time Market.** Requests for substitution for Forced Outages in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

40.9.3.6.44 RA Substitute Capacity From A Single Resource

- (a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on ~~a Forced Outage or de-rate Outage~~ may provide RA Substitute Capacity for that capacity from a single resource.
- (b) **Local Capacity Area Resource Substitution**
 - (1) **Pre-Qualified Substitution.**
 - (A) **Annual Process.** The CAISO annually will ~~annually~~ conduct a process to

assess the eligibility of resources to pre-qualify as RA Substitute Capacity for Local Capacity Resource Adequacy Resources that potentially could be Listed Local RA Capacity in the time period covered by the process. The CAISO will publish a list of the pre-qualified resources in accordance with the timeline in the Business Practice Manual.

- (B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy Resource for which it could substitute.
- (C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource ~~on a Forced Outage or de-rate on Outage~~ must submit a timely substitution request in accordance with Section 40.9.3.6.3(c).
- (D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.14(b)(1)(C) and 40.9.3.6.3(b).

(2) **Non-Pre-Qualified Substitution.**

- (A) **Day-Ahead Market.** The Scheduling Coordinator for ~~a Local Capacity Area Resource Adequacy Resource Listed Local RA Capacity on a Forced Outage or de-rate Outage~~ may submit a request to substitute a non-pre-qualified resource only in the Day-Ahead Market.
- (B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Listed Local RA Capacity ~~Local Capacity Area Resource Adequacy Resource~~ must submit a timely substitution request in accordance with Section 40.9.3.6.3(c), and the alternate resource must be located in the same Local Capacity Area.
- (C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.14(b)(2)(A) and (B), and 40.9.3.6.3(b).

(c) **Non-Local Capacity Area Resource Substitution**

- (1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for ~~RA Capacity other than Listed Local RA Capacity~~ ~~non-Local Capacity Area Resource Adequacy Resource~~ that has ~~an Outage~~ ~~Forced Outage or de-rate~~ must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c).
- (2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.14(c)(1) and 40.9.3.6.3(b).

(d) **External Resources**

- (1) **Request.** To use a Dynamic System Resource, Non-Dynamic System Resource, NRS-RA Resource, or Pseudo-Tie as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has ~~an Outage a Forced Outage or de-rate~~ must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c).
- (2) **Approval.** The CAISO will grant the request if the alternate resource is external to the CAISO Balancing Authority Area (including Pseudo-Ties), the Scheduling Coordinator for the resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meets the requirements in Sections 40.9.3.6.14(d)(1) and 40.9.3.6.3(b).

(e) **Flexible RA Capacity**

- (1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage ~~or de-rate~~ must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.
- (2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable

requirements in Sections 40.9.3.6.~~14~~(e) and 40.9.3.6.3(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the highest quality Flexible Capacity Category for the MWs of the Flexible RA Capacity commitments of the resource on outage and the alternate resource.

40.9.3.6.~~52~~ RA Substitute Capacity From Multiple Resources

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on ~~a Forced-Outage or de-rate~~ may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) Local Capacity Area Resource Substitution

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for ~~the Listed Local RA Capacity Area Resource Adequacy Resource~~ on a ~~Forced-Outage or de-rate~~ must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c) if any of the alternate resources are not pre-qualified to substitute for the resource on the outage; however, if all of the alternate resources are pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

(2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.~~52~~(b)(1) and 40.9.3.6.3(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity Area as the Resource Adequacy Resource.

(c) Non-Local Capacity Area Resources

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for ~~a non-RA Capacity other than Listed Local RA Capacity Area Resource Adequacy Resource~~ on a ~~Forced-Outage or de-rate~~ must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if all of the alternate resources meet the

requirements in Sections 40.9.3.6.~~52~~(c)(1) and 40.9.3.6.3(c).

(d) **External Resources**

- (1) **Request.** To use multiple Dynamic System Resources, Non-Dynamic System Resources, NRS-RA Resources, or Pseudo-Ties as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has an ~~n-Forced~~ Outage ~~or de-rate~~ must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c).
- (2) **Approval.** The CAISO will grant the request if the alternate resources are external to the CAISO Balancing Authority Area (including Pseudo-Ties), and the Scheduling Coordinator of each alternate resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meet the requirements in Sections 40.9.3.6.~~5e~~(d)(1) and 40.9.3.6.3(b).

(e) **Flexible RA Capacity**

- (1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage ~~or de-rate~~ must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources must be located in the CAISO Balancing Authority Area, which does not include a Pseudo-Tie of a Generating Unit or a Resource-Specific System Resource.
- (2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.3.6.~~25~~(de)(1) and 40.9.3.6.3(c).

40.9.3.6.~~63~~ **Multiple Substitution by One Resource.** The Scheduling Coordinator for a resource already providing RA Substitute Capacity may provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on a ~~a-Forced~~ Outage ~~or de-rate~~, subject to approval by the CAISO pursuant to Section 40.9.3.6.~~41~~ or 40.9.3.6.~~52~~.

40.9.3.6.~~74~~ **Resource Adequacy Obligation.** To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40 applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be

released from this obligation and the substitution requirements in Section 40.9 -

- (a) at the end of the approved substitution period; or
- (b) upon request by either the Scheduling Coordinator for the resource on ~~Forced~~ Outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in accordance with the process set forth in the Business Practice Manual.

40.9.3.6.85 Treatment of Unbid Capacity. If the Scheduling Coordinator for RA Substitute Capacity does not submit Bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO --

- (1) will treat the unbid capacity as unavailable for purposes of Section 40.9; and
- (2) will reflect that unavailability in the RAIM availability calculation for the Resource Adequacy Resource providing the RA Substitute Capacity.

40.9.3.6.9 Substitution Opportunity Information

In order to make information available to Market Participants pertinent to the provisions of this Section 40.9.3.6, the CAISO will:

- (a) Annually post on the CAISO Website the due ~~dates~~[A2] for each month of the following Resource Adequacy compliance year the various submissions the CAISO requires under the Resource Adequacy program; and
- (b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity that may be needed or available as RA Substitute Capacity in the bilateral market. Use of the bulletin board is voluntary and is for informational purposes only.

* * * *

40.9.4 Availability Assessment

- (a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on --
 - (1) the availability assessment of the resource's minimum daily availability of local and/or

system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping Resource Adequacy commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;

- (2) including the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an ~~an Forced~~ Outage, except to the extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6, the Outage is approved by the CAISO without requiring RA Substitute Capacity under other authority of Section 9 or Section 40, or the Forced Outage is excluded from RAIM under Section 40.9.3.45; and
- (3) including the capacity, duration, and must-offer requirement for any RA Substitute Capacity, ~~RA Replacement Capacity,~~ or CPM Capacity the resource is committed to provide; and

~~(4) —excluding the Maintenance Outages specified in Section 40.9.3.4.~~

- (b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly average availability.
- (c) If the resource is committed to provide local and/or system RA capacity and Flexible RA Capacity in a month, but does not provide both for the full month, the CAISO prorates the number of days that local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

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40.10.5 Flexible RA Capacity Plans

40.10.5.1 LSE Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly LSE Flexible RA Capacity Plans for each Load Serving Entity it represents.
- (b) **Annual Plan.** Each annual LSE Flexible RA Capacity Plan must -

- (1) demonstrate that the Load Serving Entity has procured for each month at least 90 percent of the annual Flexible RA Capacity requirement determined by the CAISO; or the amount of Flexible RA Capacity required by the Load Serving Entity's Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) identify the resources the Load Serving Entity intends to rely on to provide the Flexible RA Capacity, but need not identify the flexible resource adequacy categories; and
 - (3) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (c) **Monthly Plan.** The monthly LSE Flexible RA Capacity Plan must --
- (1) demonstrate that the Load Serving Entity procured 100 percent of the total monthly Flexible RA Capacity requirement determined by the CAISO; or the monthly amount of Flexible RA Capacity required by the Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
 - (2) demonstrate that the Load Serving Entity met the total monthly requirement determined by the CAISO within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category; or only if the Local Regulatory Authority has established its own flexible capacity requirement, show that the Load Serving Entity has met the total monthly requirement determined by the Local Regulatory Authority within the minimum or maximum quantity for each Flexible Capacity Category required by the Local Regulatory Authority, if applicable;
 - (3) identify all resources the Load Serving Entity will rely on to provide the Flexible RA Capacity and for each resource specify the Flexible Capacity Category in which the Flexible RA Capacity will be provided; and
 - (4) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Load Serving Entity may

submit at any time from 45 days through ~~3041~~ days in advance of the first day of the month covered by the plan, a revision to its monthly LSE Flexible RA Capacity Plan to correct either: (i) a discrepancy between its monthly LSE Flexible RA Capacity Plan and the monthly Supply Plan of a Resource Adequacy Resource providing that Load Serving Entity with Flexible RA Capacity; or (ii) a deficiency in how much Flexible RA Capacity was provided on the monthly LSE Flexible RA Capacity Plan~~an error in the plan~~. The CAISO will not accept any revisions to a monthly LSE Flexible RA Capacity Plan from ~~3040~~ days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

(e) **Reporting Exemption.** Notwithstanding the above, a Load Serving Entity is not obligated to submit a monthly LSE Flexible RA Capacity Plan for a given month if the Load Serving Entity's contribution to the three-hour net load ramp is less than 1 MW for that month. Except to the extent allowed under section 43A.8.8(e), such Load Serving Entity is not exempt for any relevant cost allocation from a CPM designation made pursuant to Section 43A associated with a monthly RA capacity obligation of less than 1 MW.

40.10.5.1.1 Load-Following MSS

- (1) Each Load-following MSS Load Serving Entity for which the CAISO has calculated an allocable share of the Flexible Capacity Need under Section 40.10.2.2 must submit annual and monthly LSE Flexible RA Capacity Plans pursuant to this Section 40.10.5.1 to identify the Flexible RA Capacity it is using to satisfy such requirement.
- (2) The Load-following MSS must increase the Flexible RA Capacity in its monthly plan by the MW amount of Capacity for a Variable Energy Resource that is initially shown as being included in the Load-following MSS Load Serving Entity's resource portfolio in the information required pursuant to Section 40.10.1.2, but is subsequently not included in the current MSS resource portfolio at the time the monthly LSE Flexible RA Capacity Plan is due for the applicable month.

40.10.5.2 Resource Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly

Resource Flexible RA Capacity Plans for each resource it represents that provides Flexible RA Capacity; except that an annual plan is not required for 2015.

- (b) **Annual Plan.** The annual Resource Flexible RA Capacity Plan shall --
- (1) verify the resource's agreement to provide Flexible RA Capacity during the next Resource Adequacy Compliance Year; and
 - (2) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (c) **Monthly Plan.** The monthly Resource Flexible RA Capacity Plan shall --
- (1) verify the resource's agreement to provide Flexible RA Capacity during the month;
 - (2) include an affirmative representation by the Scheduling Coordinator submitting the plan that the CAISO is entitled to rely on the accuracy of the information provided in the plan to perform those functions set forth in this Section 40; and
 - (3) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Resource Adequacy Resource resource may ~~correct an error in the plan by submitting a revision to its monthly Resource Flexible RA Capacity Plan~~ at any time from 45 days through ~~30~~41 days in advance of the ~~relevant first day of the~~ month, revise its monthly Flexible RA Capacity Plan to correct a discrepancy between its monthly Flexible RA Capacity Plan and a Resource Adequacy Plan of a Load Serving Entity for which that Resource Adequacy Resource is providing Flexible RA Capacity covered by the plan. The CAISO will not accept any revisions to a monthly Resource Flexible RA Capacity Plan ~~less than from 30~~40 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

40.10.5.3 Review of Flexible RA Capacity Plans

- (a) **Validation For Deficiency In An Individual LSE Plan.**

- (1) If the Local Regulatory Authority has not established its own flexible capacity procurement requirements, the CAISO will validate the annual and monthly LSE Flexible RA Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities, and will use the Effective Flexible Capacity value for each resource calculated under Section 40.10.4. The CAISO will determine whether each Load Serving Entity met its annual or monthly total Flexible RA Capacity Requirement, and for the monthly LSE Flexible RA Capacity Plan, whether it met the total monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category.
 - (2) If the Local Regulatory Authority has established its own flexible capacity procurement requirements, the CAISO will not validate the individual LSE Flexible Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities.
- (b) **Identification of Discrepancy.** The CAISO will compare all LSE Flexible RA Capacity Plans and Resource Flexible RA Capacity Plans to identify any discrepancy in the Resource Adequacy Resources listed or the amount of the Resource Adequacy Capacity committed.
- (c) **Evaluation For Cumulative Deficiency.**
- (1) The CAISO will evaluate the annual LSE Flexible RA Capacity Plans of all Load Serving Entities on a cumulative basis to determine whether the total amount of Flexible RA Capacity shown in the plans meets 90 percent of the annual Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(a).
 - (2) The CAISO will evaluate the monthly Flexible RA Capacity Plans of all Load Serving Entities to determine whether (i) the total amount of Flexible RA Capacity shown in the plans, limited to the maximum monthly requirement for each category, meets the applicable monthly Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(b)(1); or (ii) the total amount of Flexible RA Capacity shown in the base ramping Flexible Capacity Category in the plans meets the minimum monthly requirement for the base ramping Flexible Capacity Category determined by the CAISO pursuant to Section 40.10.1.5 or

whether a cumulative deficiency may exist under Section 43.2.7(b)(2).

- (d) **Calculation of Flexible RA Capacity.** The CAISO will calculate the amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans using the MW amount of Flexible RA Capacity for each resource designated in a plan as a Flexible RA Capacity Resource up to the Effective Flexible Capacity value for the resource calculated under Section 40.10.4.
- (e) **Allocated Flexible RA Capacity Requirement.** The CAISO will calculate the Load Serving Entity's allocated annual and monthly Flexible RA Capacity Requirement --
 - (1) For Load Serving Entities within a Local Regulatory Authority that has not adopted its own allocation methodology, the CAISO will calculate the Load Serving Entity's allocated requirement based on the CAISO's allocation methodology set forth in Section 40.10.2.
 - (2) For Load Serving Entities within a Local Regulatory Authority that has adopted its own allocation methodology, the CAISO will use that Local Regulatory Authority's methodology for the Local Regulatory Authority's jurisdictional Load Serving Entities.

40.10.5.4 Deficiency in LSE Flexible RA Capacity Plan

- (a) **Finding and Notification.** If the CAISO's validation under Section 40.10.5.3(a) finds either: (i) that the total amount of Flexible RA Capacity included in an annual or monthly LSE Flexible RA Capacity Plan is not sufficient to satisfy the Load Serving Entity's allocated Flexible RA Capacity Requirement; or (ii) that the total monthly requirement in a monthly LSE Flexible RA Capacity Plan was not met within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, the CAISO will --
 - (1) notify the relevant Scheduling Coordinator, and the Local Regulatory Authority or federal agency with jurisdiction over the relevant Load Serving Entity, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and
 - (2) provide the notice at least ~~4025~~ days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a deficiency exists.
- (b) **Resolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall -

- (1) demonstrate, no less than ~~3044~~ days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan, or
 - (2) advise the CAISO that the Load Serving Entity's Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.
- (c) **Unresolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.5 Discrepancy Between Flexible RA Capacity Plans.

- (a) **Finding and Notification.** If the CAISO's review under Section 40.10.5.3(b) finds a discrepancy between an LSE Flexible RA Capacity Plan and a Resource Flexible RA Capacity Plan, the CAISO will --
- (1) notify the relevant Scheduling Coordinators of the ~~discrepancy mismatch~~ in an attempt to resolve the discrepancy in accordance with the procedures set forth in the Business Practice Manual; and
 - (2) provide the notice at least ~~4025~~ days in advance of the first day of the month covered by the plans and include the reasons the CAISO believes a discrepancy exists.
- (b) **Resolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and the discrepancy is resolved, the Scheduling Coordinator must provide the CAISO with a revised LSE Flexible RA Capacity Plan or Resource Flexible RA Capacity Plan, as applicable, no less than ~~3044~~ days prior to the first day of the month covered by the plans.
- (c) **Unresolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and is not advised that the discrepancy is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.6 LRA Deficiency.

- (a) **Finding and Notification.** If the CAISO's evaluation under Section 40.10.5.3(c) finds a cumulative deficiency in Flexible RA Capacity, the CAISO will --
- (1) identify each Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need using the cumulative amount of Flexible RA Capacity that the Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total and, for the monthly Flexible RA Capacity Plans, in each Flexible Capacity Category;
 - (2) identify each Load Serving Entity that: (i) is subject to the jurisdiction of a Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need under Section 40.10.5.6; and (ii) did not include sufficient Flexible RA Capacity in an annual or monthly plan to meet its allocated Flexible RA Capacity Requirement or did not meet the monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, based on the allocation methodology of the Local Regulatory Authority if it has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities;
 - (3) notify each Local Regulatory Authority identified under Section 40.10.5.6(a)(1) and the Scheduling Coordinator for each Load Serving Entity identified under Section 40.10.5.6(a)(2) of the cumulative deficiency in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and
 - (4) provide the notice at least ~~4025~~ days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a cumulative deficiency exists.
- (b) **Resolved Deficiency.** If the CAISO provides a notice of cumulative deficiency under Section 40.10.5.6(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall demonstrate, no less than ~~3011~~ days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan.
- (c) **Unresolved Deficiency.** If the CAISO provides a notice of deficiency under Section 40.10.5.6(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in

the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

* * * *

43A.2.1 SC Failure To Show Sufficient Local Capacity Area Resources

43A.2.1.1 Annual Resource Adequacy Plan

Where a Scheduling Coordinator fails to demonstrate in an annual Resource Adequacy Plan, submitted separately for each represented LSE, procurement of each LSE's share of Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity), as determined in Section 40.3.2 for each month of the following Resource Adequacy Compliance Year, the CAISO shall have the authority to designate CPM Capacity; provided, however, that the CAISO shall not designate CPM Capacity under this Section 43A.2.1.1 until after the Scheduling Coordinator has had the opportunity to cure the deficiency set forth in Section 40.7. The CAISO's authority to designate CPM Capacity under this Section 43A.2.1.1 is to ensure that each Local Capacity Area in a TAC Area in which the LSE serves Load has Local Capacity Area Resources in the amounts and locations necessary to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, after assessing the effectiveness of Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans and any supplements thereto, as may be permitted by the CPUC, Local Regulatory Authority, or federal agency and provided to the CAISO in accordance with Section 40.7, whether or not such Generating Units under RMR Contracts and Resource Adequacy Resources are located in the applicable Local Capacity Area.

43A.2.1.2 Monthly Resource Adequacy Plan

Where a Scheduling Coordinator fails to demonstrate in a monthly Resource Adequacy Plan, submitted separately for each represented LSE, procurement of each LSE's share of Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity), as determined in Section 40.3.2 for the reported month, the CAISO shall have the authority to designate CPM Capacity; provided, however, that the CAISO shall not designate CPM Capacity under this Section 43A.2.1.2 until after the Scheduling

Coordinator has had the opportunity to cure the deficiency as set forth in Section 40.7. In no case is the CAISO authorized to designate CPM Capacity under this Section 43A.2.1.2 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Local Capacity Area Resource that is on a Maintenance Outage at some point during the applicable month. The CAISO's authority to designate CPM Capacity under this Section 43A.2.1.2 is to ensure that each Local Capacity Area in a TAC Area in which the LSE serves Load has Local Capacity Area Resources in the amounts and locations necessary to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, after assessing the effectiveness of all Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted monthly Resource Adequacy Plans and any supplements thereto, as may be permitted by the CPUC, Local Regulatory Authority, or federal agency and provided to the CAISO in accordance with Section 40.7.

* * * *

43A.2.2 Collective Deficiency In Local Capacity Area Resources

The CAISO shall have the authority to designate CPM Capacity where the Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity) specified in the annual Resource Adequacy Plans of all applicable Scheduling Coordinators, after the opportunity to cure under Section 43A.2.2.1 has been exhausted, fail to ensure compliance in one or more Local Capacity Areas with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, regardless of whether such resources satisfy, for the deficient Local Capacity Area, the minimum amount of Local Capacity Area Resources identified in the Local Capacity Technical Study, and after assessing the effectiveness of Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans, whether or not such Generating Units under RMR Contracts and Resource Adequacy Resources are located in the applicable Local Capacity Area. The CAISO may, pursuant to this Section 43A.2.2, designate CPM Capacity in an amount and location sufficient to ensure compliance with the Reliability Criteria applied in the Local Capacity Technical Study.

* * * *

43A.2.3 SC Failure To Show Sufficient Resource Adequacy Resources

The CAISO shall have the authority to designate CPM Capacity where a Scheduling Coordinator fails to demonstrate in an annual or monthly Resource Adequacy Plan, submitted separately for each represented LSE, procurement of sufficient Resource Adequacy Resources to comply with each LSE's annual and monthly Demand and Reserve Margin requirements under Section 40; provided that the CAISO shall not designate CPM Capacity under this Section 43A.2.3 until after the Scheduling Coordinator has had the opportunity to cure the deficiency as set forth in Section 40.7; provided further that the CAISO shall not designate CPM Capacity under this Section 43A.2.3 unless there is an overall net deficiency in meeting the total annual or monthly Demand and Reserve Margin requirements, whichever is applicable, after taking into account all LSE demonstrations in their ~~applicable-annual~~ or monthly Resource Adequacy Plans. Furthermore, in no case is the CAISO authorized to designate CPM Capacity under this Section 43A.2.3 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Resource Adequacy Resource that is on a Maintenance Outage at some point during the applicable month.

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43A.2.7 Cumulative Deficiency in Flexible RA Capacity

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43A.2.7.2 Designation

After the opportunity to resolve the cumulative deficiency under Section 40.10.5.4 has been exhausted, if total required Flexible RA Capacity reported to the CAISO in revised annual or monthly Flexible RA Capacity Plans does not meet the Flexible RA Capacity Need in accordance with this Section, the CAISO may issue a Flexible Capacity CPM designation in an amount sufficient to alleviate the deficiency. In no case, however, is the CAISO authorized to designate CPM Capacity under this Section 43A.2.7.2 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Flexible RA Capacity resource that is on a Maintenance Outage at some point during the applicable month.

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43A.4.2 Administering the CSPs

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43A.4.2.2 Minimizing the Overall Cost of Meeting the Reliability Need

Once the CAISO has identified the pool of resources that can meet the designation criteria, the CAISO shall then designate Eligible Capacity from that pool of resources in order to minimize the overall cost of meeting the designation criteria. Aside from considering the respective offer prices from the Eligible Capacity, as part of this cost minimization the CAISO also may consider: the quantity of a resource's available Eligible Capacity, based on a resource's PMin, relative to the remaining amount of capacity needed; and the quantity of a resource's available Eligible Capacity, based on outages and ~~replacement~~ ~~or~~ substitute daily RA Capacity.

For a potential Exceptional Dispatch CPM, the CAISO also shall consider the overall costs to the CAISO of issuing the Exceptional Dispatch to RA Capacity rather than to Eligible Capacity. If the CAISO determines it would minimize overall costs to issue the Exceptional Dispatch to RA Capacity, then the CAISO shall issue the Exceptional Dispatch to RA Capacity and not designate Eligible Capacity as CPM Capacity to meet the designation criteria.

If capacity would receive a CPM designation based on the cost minimization criteria but the resource from which the capacity would be provided faces use limitations such that the capacity, in the CAISO's reasonable discretion, poses the risk of being unavailable to fully meet the reliability need creating the CPM event, then the CAISO may, at its reasonable discretion and giving due regard for meeting cost minimization considerations, not grant that capacity a CPM designation and instead grant the designation to the next-best capacity at meeting the CAISO cost minimization process defined in this Section 43A.4.2.2. In exercising this discretion, the CAISO shall not unduly discriminate against resources with use limitations.

Additionally, if capacity would receive a CPM designation based on the cost minimization criteria but the resource from which the capacity would be provided is already going to be RA Capacity at some point during the CPM designation period and, in the CAISO's reasonable discretion, poses the risk of the

capacity being unavailable fully to meet the reliability need creating the need for a CPM designation, then the CAISO may, at its reasonable discretion and giving due regard for meeting cost minimization considerations, not grant that capacity a CPM designation and instead grant the designation to the next-best capacity at meeting the CAISO cost minimization process defined in this Section 43A.4.2.2.

* * * *

43A.8.8 Allocation of Flexible Capacity CPM Costs

(a) Calculation of Deficiency by LRA.

(1) The CAISO will determine whether each Local Regulatory Authority met its allocable share of the Flexible Capacity Need based on the cumulative amount of Flexible RA Capacity that Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total, and included in their monthly Flexible RA Capacity Plans for each Flexible Capacity Category.

(2) The CAISO will calculate the total amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans collectively for all Load Serving Entities within the Local Regulatory Authority, and the total amount included in the monthly Flexible RA Capacity Plans for each Flexible Capacity Category using the minimum or maximum quantity, as applicable, for each category, and using the Effective Flexible Capacity value calculated under Section 40.10.4 for each resource designated in a plan as a Flexible RA Capacity Resource.

(b) **Allocation By CAISO Method.**

(1) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, in total and in each Flexible Capacity Category, meets or exceeds the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, the CAISO will not allocate any of the Flexible Capacity CPM costs to the Scheduling Coordinators for those Load Serving Entities.

(2) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, either in total or for a Flexible

Capacity Category, is less than the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, and that Local Authority has not established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will allocate the Flexible Capacity CPM costs proportionately to the Scheduling Coordinator of each jurisdictional Load Serving Entity that failed to meet its procurement obligation.

(c) **Allocation by Local Regulatory Authority Method.** If Load Serving Entities jurisdictional to a Local Regulatory Authority have a cumulative deficiency under Section 43A.8.8(a) and the Local Regulatory Authority has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will use the Local Regulatory Authority's methodology to allocate the Flexible Capacity CPM costs to the Scheduling Coordinator of each Load Serving Entity that is jurisdictional to that Local Regulatory Authority and that failed to meet its procurement obligation. If the Local Regulatory Authority does not notify the CAISO of its allocation method by the deadline established in the relevant Business Practice Manual, then the CAISO allocates Flexible Capacity CPM costs using its default allocation methodology under Section 43A.8.8(b)(2).

(d) **Reduction of Cost Allocation.** If the CAISO issues a Flexible Capacity CPM designation, a Scheduling Coordinator for a Load Serving Entity that was deficient, but provided additional Flexible RA Capacity in a revised annual or monthly Flexible RA Capacity Plan consistent with the Market Notice under Section 43A.2.7.1 --

(1) will be not be allocated a share of the Flexible Capacity CPM procurement costs if the additional Flexible RA Capacity included in that LSE's revised LSE Flexible RA Capacity Plan resolved the total deficiency of that Load Serving Entity; or

(2) will be allocated a share of the Flexible Capacity CPM procurement costs on a proportionate basis to the extent that Load Serving Entity has a remaining partial deficiency.

(e) **Small Load Serving Entity Exemption.** Notwithstanding the above, a Scheduling Coordinator for a Load Serving Entity will not be allocated any costs under this section 43A.8.8 if that Load Serving Entity's contribution to the three-hour net load ramp is less than 1 MW in all 12 months of the calendar year in which the Flexible Capacity CPM occurs. Any CPM costs that are unallocated as a result of this exemption will be allocated to the remaining Scheduling Coordinators using the default allocation

methodology under Section 43A.8.8(b)(2)

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Appendix A

Definitions to the CAISO Tariff

- Committed RA Capacity

Capacity that is either RA Capacity, Flexible RA Capacity, RA Substitute Capacity, ~~RA Replacement Capacity~~, CPM Capacity, or Flexible Capacity CPM.

- ~~[Not Used] Non-Specified RA Replacement Capacity~~

~~Capacity the Load Serving Entity procured that is capable of providing Resource Adequacy Capacity, but not designated as Resource Adequacy Capacity in the Load Serving Entity's monthly Resource Adequacy Plan for the month.~~

- Local Capacity Area Resource Deficiency

The monthly difference in MW between any applicable Local Capacity Area ~~Resource~~ requirements for an LSE as established pursuant to Section 40.3.2 and the quantity of monthly MW shown in the ~~LSE's~~ LSE's Resource Adequacy Plan.

- Local Capacity Area Resources

Resource Adequacy Capacity from a Generating Unit listed in the technical study or Participating Load or Proxy Demand Resource or Reliability Demand Response Resource that is located within a Local Capacity Area capable of contributing toward the amount of capacity required in a particular Local Capacity Area.

- Listed Local RA Capacity

The capacity of Local Capacity Area Resources that, subject to resolution of a potential discrepancy as provided in Section 40.7(b), is identified on a Load Serving Entity's Resource Adequacy Plan and a supplier's corresponding Supply Plan as being obligated (for the purposes of sections 40.9.3.6.7 and 40.9.3.6.8) to provide RA Substitute Capacity from the same Local Capacity Area as the Listed Local RA Capacity.

- Off-Peak Opportunity RA Maintenance Outage

A Maintenance Outage at a Resource Adequacy Resource that is approved by the CAISO to be initiated and completed during off-peak hours (as specified in the Business Practice Manual) without RA ~~Replacement~~ Substitute Capacity for the Resource Adequacy Capacity on ~~the outage or de-rate~~ Outage.

- RA Maintenance Outage With SubstitutionReplacement

A Maintenance Outage, or change to an Approved Maintenance Outage, at a Resource Adequacy Resource that the CAISO receives ~~no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and~~ no less than eight (8) days prior to the start of the outage and that includes RA ~~Substitute~~ Replacement Capacity for the Resource Adequacy Capacity on ~~the o~~ Outage or de-rate.

- RA Maintenance Outage Without SubstitutionReplacement

A Maintenance Outage, or change to an Approved Maintenance Outage at a Resource Adequacy Resource that the CAISO receives ~~no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and~~ no less than eight (8) days prior to the start of the outage without RA ~~Substitute~~ Replacement Capacity for the Resource Adequacy Capacity on ~~the o~~ Outage or de-rate.

- [Not Used]RA Replacement Capacity

~~Specified RA Replacement Capacity, Non-Specified RA Replacement Capacity, or capacity that is not~~

~~Resource Adequacy Capacity, CPM Capacity, or capacity under an RMR contract, that replaces Resource Adequacy Capacity that is not operationally available to the CAISO due to a Maintenance Outage, an RA Maintenance Outage With Replacement or a Forced Outage approved under Section 9.3.1.3.3.1(e)(4).~~

- RA Substitute Capacity

Capacity that ~~the CAISO permits under the CAISO Tariff substitutes to be substituted~~ for a Resource Adequacy Resource that is on ~~a Forced Outage or de-rate~~.

- Short-Notice Opportunity RA Maintenance Outage

A Forced Outage at a Resource Adequacy Resource accommodated by the CAISO on short notice without ~~RA Replacement Capacity or~~ RA Substitute Capacity for the Resource Adequacy Capacity on ~~the~~ ~~Outage or de-rate~~.

- ~~[Not Used] Specified RA Replacement Capacity~~

~~RA Replacement Capacity specified by the Load Serving Entity to replace specific Resource Adequacy Capacity included in its monthly Resource Adequacy Plan, for all or a portion of the period that the Resource Adequacy Capacity will not be operationally available to the CAISO during the month due to an Approved Maintenance Outage.~~

- ~~[Not Used] System Total Available RA Capacity~~

~~The system total Resource Adequacy Capacity provided in the Resource Adequacy Plans, including the total MW of Specified RA Replacement Capacity accepted by the CAISO, less the total MW of unreplaced capacity in the Resource Adequacy Plans that is scheduled to take an Approved Maintenance Outage during the month.~~

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Appendix AA

Grandfathered Resource Adequacy Provisions for February 2018 to March 2018

Notwithstanding any other provisions of the CAISO Tariff, the following provisions shall apply to the CAISO's treatment of RA Capacity for the February 2018 and March 2018 RA months. In all other respects, the CAISO Tariff (including the provisions of Section 9, Section 40, Section 43A, and Appendix A) not covered by this Appendix AA, will apply to the CAISO's treatment of RA Capacity for the February 2018 and March 2018 RA months.

* * * *

9.3.1.3 Coordinating Maintenance Outages of RA Resources

In performing outage coordination management under Section 9, and this Section 9.3.1.3, the CAISO may take into consideration the status of a Generating Unit as a Resource Adequacy Resource. The CAISO may deny, reschedule or cancel an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid or Generating Units of Participating Generators if it determines that the outage is likely to have a detrimental effect on the availability of Resource Adequacy Capacity or the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

9.3.1.3.1 Replacement Requirement for LSEs

9.3.1.3.1.1 LSE RA Plans

Each Scheduling Coordinator for a Load Serving Entity shall submit to the CAISO a monthly Resource Adequacy Plan that meets the requirements set forth in Sections 40.2.2.4 or 40.2.3.4, as applicable. Resource Adequacy Capacity included in the monthly Resource Adequacy Plan that, as of the due date for the plan, is scheduled to take an Approved Maintenance Outage during the period of designation may be subject to replacement. To the extent that a resource included in a monthly Resource Adequacy Plan as Resource Adequacy Capacity is scheduled to take an Approved Maintenance Outage for all or portion of its capacity during the resource adequacy month, the capacity scheduled for outage is not operationally available to the CAISO and may be required by the CAISO to be replaced with capacity from another resource(s) that is operationally available in the amount and for the duration of the scheduled outage during that month, as discussed in Sections 9.3.1.3.2.2 through 9.3.1.3.2.5.

9.3.1.3.1.2 RA Resource Pending Maintenance Outage Requests

If a Resource Adequacy Resource requested a planned Maintenance Outage, or change to an Approved Maintenance Outage, more than forty-five days prior to the first day of the resource adequacy month, but does not receive approval or denial of the request by the CAISO as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO, as part of the validation under Sections 9.3.1.3.2.3 and 40.7(b), will determine whether the outage should be approved and, if so, whether it must be replaced in the Resource Adequacy Plan with capacity from another resource that is operationally available in the amount and for the duration of the scheduled outage during the month.

9.3.1.3.1.3 Optional List of Specified RA Replacement Capacity

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Specified RA Replacement Capacity for the CAISO's use as RA Replacement Capacity to replace specific Resource Adequacy Capacity identified by the Load Serving Entity that is in its Resource Adequacy Plan, and that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.2 and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Specified RA Replacement Capacity, the CAISO, in its discretion, will use the specified capacity as RA Replacement Capacity to automatically replace the identified Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days specified by the Load Serving Entity that the Resource Adequacy Resource is scheduled to take an Approved Maintenance Outage during the month. The Specified RA Replacement Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the specified capacity is used by the CAISO as RA Replacement Capacity as provided in Section 9.3.1.3.2.2. The list of Specified RA Replacement Capacity included with a monthly Resource Adequacy Plan shall:

- (a) Identify the resource being replaced,
- (b) Identify the resource that will provide the Specified RA Replacement Capacity, the MW amount and time period of the replacement, and other information as may be required in the Business Practice Manuals, and
- (c) Be submitted in the format required by the Business Practice Manual.

9.3.1.3.1.4 Optional List of Non-Specified RA Capacity

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Non-Specified RA Capacity for the CAISO's use as RA Replacement Capacity to replace Resource Adequacy Capacity included in that Load Serving Entity's monthly Resource Adequacy Plan that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.3, 9.3.1.3.2.4, and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Non-Specified RA Capacity in its Resource Adequacy Plan, the CAISO, in its discretion, will select capacity from the list and use the selected capacity as RA Replacement Capacity to automatically replace Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days on which the CAISO's validation of the plan determines that the designated capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month must be replaced. The listed Non-Specified RA Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the Non-Specified Capacity is selected by the CAISO and used as RA Replacement Capacity as provided in Section 9.3.1.3.2.4. The list of Non-Specified RA Capacity included with a monthly Resource Adequacy Plan shall:

- (a) Rank each resource that has available Non-Specified RA Capacity in the order of use preferred by the Load Serving Entity;
- (b) Provide the identity of the resource, the MW amount of available capacity, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual;
- (c) Indicate the willingness of the Load Serving Entity to offer each resource that has available Non-Specified RA Capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A; and
- (d) Be submitted in the format required by the Business Practice Manuals.

9.3.1.3.2 CAISO Replacement Determination For LSE RA Plans

9.3.1.3.2.1 Review of LSE RA Plans

The CAISO shall review each monthly Resource Adequacy Plan pursuant to Section 40.7(b) to validate that the capacity provided is equal to or greater than the applicable forecasted monthly Demand and

Reserve Margin for the Load Serving Entity and shall provide the results of this review to the Local Regulatory Authority. Additionally, the CAISO will review each monthly Resource Adequacy Plan to identify any Resource Adequacy Capacity included in the plan that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month.

9.3.1.3.2.2 Replacement By Specified RA Replacement Capacity

If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes no capacity that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, no replacement by Specified RA Replacement Capacity will occur. If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes capacity that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, and the Load Serving Entity has provided a list of Specified RA Replacement Capacity, then the CAISO will verify that the Specified RA Replacement Capacity is available during the specified replacement period and will replace the unavailable capacity in that Load Serving Entity's Resource Adequacy Plan with the available Specified RA Replacement Capacity. The CAISO will not accept any Specified RA Replacement Capacity that is unavailable during the specified replacement period. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity that the Specified RA Replacement Capacity has been accepted as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity must verify their agreement to provide the Specified RA Replacement Capacity. For the duration of the period that the resource is providing Specified RA Replacement Capacity, the resource shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6, and the standard capacity product provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.2.3 CAISO Replacement Determination

Following replacement by Specified RA Replacement Capacity, the CAISO will determine whether Load

Serving Entities are required to replace any capacity remaining in their monthly Resource Adequacy Plans that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month. The CAISO will make the replacement determination as follows:

- (a) For each day of the month, the CAISO will calculate the System Total Available RA Capacity provided in the Resource Adequacy Plans and compare that MW amount to the CAISO system RA Reliability Margin.
- (b) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans exceeds the CAISO system RA Reliability Margin, the CAISO may determine that no further replacement is required.
- (c) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans is less than the CAISO system RA Reliability Margin, the CAISO may require replacement of the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, as provided in Sections 9.3.1.3.2.3 and 9.3.1.3.2.4. When replacement is required, the Scheduling Coordinator for each Load Serving Entity that did not include in its Resource Adequacy Plan available Resource Adequacy Capacity for the day in a MW amount equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for that Load Serving Entity will be required to provide the RA Replacement Capacity.
- (d) When replacement is required under Section 9.3.1.3.2.3(c), the CAISO will consider whether the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage requires replacement in the reverse order of the dates on which the outage requests were received. The Resource Adequacy Capacity subject to the most recently requested Approved Maintenance Outages will require replacement before the Resource Adequacy Capacity subject to Approved Maintenance Outages that were requested on earlier dates. Any request for a change to an Approved Maintenance Outage that extends the scheduled duration of the outage or increases the MW amount of capacity on outage will be treated as a new outage request.
- (e) Beginning with the date of the most recent request to take an Approved Maintenance

Outage during the month, the CAISO will either replace the unavailable Resource Adequacy Capacity with Non-Specified RA Replacement Capacity under Section 9.3.1.3.2.4, or will require the Scheduling Coordinator for the Load Serving Entity to replace the unavailable Resource Adequacy Capacity under Section 9.3.1.3.2.5. The CAISO will continue this replacement process in reverse order of the dates on which the requests to take the Approved Maintenance Outages were received until sufficient unavailable Resource Adequacy Capacity has been replaced each day to meet the criteria set forth in Section 9.3.1.3.2.3(b).

9.3.1.3.2.4 Replacement By Non-Specified RA Replacement Capacity

For each day of the month where the CAISO determines under Section 9.3.1.3.2.3 that replacement is required of Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, the CAISO may replace the unavailable capacity with Non-Specified RA Replacement Capacity as follows:

- (a) The CAISO will identify each Load Serving Entity that did not include in its monthly Resource Adequacy Plan available Resource Adequacy Capacity for each day in a MW amount equal to or greater than its applicable forecasted monthly Demand Reserve Margin, and will verify whether each such Load Serving Entity provided a list of Non-Specified RA Replacement Capacity with its plan.
- (b) To the extent that a Load Serving Entity provided a list of Non-Specified Replacement Capacity, the CAISO during the replacement process set forth in Section 9.3.1.3.2.3 will select capacity, in its discretion, from the list and use the selected capacity as RA Replacement Capacity to automatically replace unavailable Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan for each day where the CAISO determines that replacement is required.
- (c) The CAISO will verify whether the Non-Specified RA Replacement Capacity on each list is available during the replacement period and replace the unavailable capacity in the Resource Adequacy Plan with available Non-Specified RA Replacement Capacity. The CAISO will not accept Non-Specified RA Replacement Capacity that is unavailable during the replacement period.

- (d) The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and the Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity that the Non-Specified RA Replacement Capacity has been selected as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity must verify its agreement to provide the Non-Specified RA Replacement Capacity.
- (e) For the duration of the period that the Non-Specified RA Capacity is providing RA Replacement Capacity, it shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the standard capacity product provisions in Section 40.9 for the MW amount and duration of the replacement period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.2.5 Unreplaced Capacity In An RA Plan

Following replacement by Non-Specified Capacity, for each day of the month where the criteria set forth in Section 9.3.1.3.2.3(b) is not met, and where the Load Serving Entity either did not provide Non-Specified RA Replacement Capacity, or the Non-Specified RA Replacement Capacity it provided was already selected by the CAISO, was insufficient, or was unavailable during the replacement period, the Scheduling Coordinator for the Load Serving Entity will have a replacement requirement. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity of the replacement requirement and will identify the MW amount of capacity remaining in its Resource Adequacy Plan that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage on that day and that it is required to replace. The CAISO will treat the unreplaced capacity as an outage replacement requirement pursuant to Section 40.7(b). If the Scheduling Coordinator for the Load Serving Entity does not provide sufficient operationally available RA Replacement Capacity to meet the replacement requirement identified by the CAISO, and the resource does not reschedule or cancel the outage after its Supply Plan is submitted, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A.

9.3.1.3.3 Replacement Requirement for RA Resources

To the extent that a resource is committed to provide Resource Adequacy Capacity during a month, the Scheduling Coordinator for the resource may request an RA Maintenance Outage With Replacement, RA Maintenance Outage Without Replacement, Off Peak Opportunity RA Maintenance Outage, or Short-Notice Opportunity RA Outage, or may request to reschedule an Approved Maintenance Outage, for that Resource Adequacy Capacity in accordance with the provisions of this Section. The timelines set forth in this Section for submitting an Outage request and classifying the outage as a Maintenance Outage or a Forced Outage exclude the day that the request is submitted and the day that the outage is scheduled to commence.

9.3.1.3.3.1 RA Maintenance Outage With Replacement

(a) **Replacement Option.** The Scheduling Coordinator of a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a planned Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage With Replacement during that month.

(b) **Request.** A request for an RA Maintenance Outage With Replacement must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start of the outage; (ii) provide RA Replacement Capacity in an amount no less than the Resource Adequacy Capacity designated for the resource for the duration of the scheduled outage; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an RA Maintenance Outage With Replacement in the order that the requests are received.

(2) The CAISO may approve the request for an RA Maintenance Outage With Replacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.1(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the request was submitted no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start date for the outage, and it meets the requirements in Section 9.3.1.3.3.1(c)(2), the CAISO may approve the request as an RA Maintenance Outage With Replacement,

(4) If the CAISO denies the request for failing to meet the requirements in Section 9.3.1.3.3.1(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request a different schedule for the RA Maintenance Outage With Replacement or may request that the CAISO accommodate the outage without RA Replacement Capacity at another time.

(d) **Resource Adequacy Obligation.** The RA Replacement Capacity for an RA Maintenance Outage With Replacement approved under Section 9.3.1.3.3.1(c)(3) shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAAIM provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

9.3.1.3.3.2 RA Maintenance Outage Without Replacement

(a) **Option for No Replacement.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage Without Replacement, without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.

(b) **Request.** A request for an RA Maintenance Outage Without Replacement must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start date of the outage; and (ii) otherwise comply with the requirements of Section 9.

(c) **Approval.**

- (1) The CAISO will consider requests received for an RA Maintenance Outage Without Replacement in the order the requests were received.
- (2) The CAISO may approve a request for an RA Maintenance Outage Without Replacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.2(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The analysis of system conditions and the overall outage schedule will include Approved Maintenance Outage requests that were received before and after the request for an RA Maintenance Outage Without Replacement.
- (3) The CAISO will not approve a request for an RA Maintenance Outage Without Replacement earlier than seven days before the first day of the resource adequacy month, and may hold the request as pending until system conditions are sufficiently known for the CAISO to determine whether the outage meets the requirements in Section 9.3.1.3.3.2(c)(2).
- (4) If the CAISO denies a request for an RA Maintenance Outage Without Replacement for failing to meet the requirements in Section 9.3.1.3.3.2(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO accommodate the outage at another time.

9.3.1.3.3.3 Off-Peak Opportunity RA Maintenance Outage

- (a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.
- (b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the

outage; (ii) schedule the outage to begin during off-peak hours (as specified in the Business Practice Manuals) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manuals) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manuals) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) Approval.

- (1) The CAISO will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.
- (2) If the request was submitted no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage, the CAISO may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that: (i) the request meets the requirements set forth in Section 9.3.1.3.3.3(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.
- (3) If the CAISO denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.3.3(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO accommodate the outage at another time.
- (4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

9.3.1.3.3.4 Short-Notice Opportunity RA Outage

- (a) Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy

Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide RA Replacement Capacity or RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage or de-rate.

(b) A Short-Notice Opportunity RA Outage shall not exceed five days in length. The request for a Short-Notice Opportunity RA Outage must: (i) be submitted no more than seven days prior to the requested start date for the outage; (ii) provide the CAISO adequate time to analyze the request before the outage begins; (iii) be submitted before the outage has commenced as a Forced Outage; and (iv) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider Short-Notice Opportunity RA Outages in the order the requests are received.

(2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO may approve the request as a Short Notice Opportunity RA Outage if it determines that: (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will be subject to the RAIM provisions in Section 40.9.

(3) If the request was submitted three days or less prior to the start date of the outage, the CAISO may approve the request as a Forced Outage if it determines that: (i) the outage and request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period; and (iv) the repairs are necessary to

maintain system or resource reliability and require immediate attention to prevent equipment damage or failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage but it will not be subject to the RAIM provisions in Section 40.9.

- (4) To the extent that an approved Short-Notice Opportunity RA Outage is not completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the RAIM provisions in Section 40.9.

9.3.1.3.4 Replacement Requirement Information

In order to make information available to Market Participants pertinent to the replacement requirement provisions in Section 9.3.1.3, the CAISO will:

- (a) Annually post on the CAISO Website a calendar of the timeline of due dates for each month of the following resource adequacy compliance year; and
- (b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity and Non-Designated RA Capacity that may be needed or available as RA Replacement Capacity in the bilateral market. Use of the bulletin board is voluntary and limited to use for informational purposes only.

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40.2.1 Reserve Sharing Load Serving Entities

40.2.1.1 Requirements for CPUC Load Serving Entities

- (a) The Scheduling Coordinator for a CPUC Load Serving Entity must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, except that the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be

submitted to the CAISO no less than 45 days in advance of the first day of the month covered by the plan, as provided in Section 40.2.1.1(e).

(b) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1(b) shall apply.

(c) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity, then the provisions of Section 40.8 shall apply.

(d) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Demand Forecast requirements, then the provisions of Section 40.2.2.3 shall apply.

(e) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Resource Adequacy Plan requirements, or where there is a requirement to submit monthly Resource Adequacy Plans but the submission date is less than 45 days in advance of the first day of the month covered by the plan, then Section 40.2.2.4 shall apply.

* * * *

40.2.2.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity, as follows:

(a) Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity as described in Section 40.3.

(b) Each monthly Resource Adequacy Plan or the same information as required to be included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of

the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual. The monthly Resource Adequacy Plan must identify all resources, including Local Capacity Area Resources, the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving Entity as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3 and applicable Reserve Margin. Resource Adequacy Plans must utilize the Net Qualifying Capacity requirements of Section 40.4.

(c) The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

(d) In order to ensure that the CAISO's outage replacement determination remains accurate, the Scheduling Coordinator for the Load Serving Entity that submits a revision to its monthly Resource Adequacy Plan to correct an error must include in the revision a MW amount of Resource Adequacy Capacity for each day of month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.

(e) In order to ensure that the amount of Resource Adequacy Capacity required to be included in the Load Serving Entity's Resource Adequacy Plan is operationally available to the CAISO throughout the resource adequacy month, the Load Serving Entity that submits the monthly Resource Adequacy Plan is subject to the replacement requirement in Section 9.3.1.3.1.

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40.3.2 Allocation of Local Capacity Area Resource Obligations

The CAISO will allocate responsibility for Local Capacity Area Resources to Scheduling Coordinators for Load Serving Entities in the following sequential manner:

(a) The responsibility for the aggregate Local Capacity Area Resources required for all Local Capacity Areas within each TAC Area as determined by the Local Capacity Technical

Study will be allocated to all Scheduling Coordinators for Load Serving Entities that serve Load in the TAC Area in accordance with the Load Serving Entity's proportionate share of the LSE's TAC Area Load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak Demand Forecast for the next Resource Adequacy Compliance Year as determined by the California Energy Commission. Expressed as a formula, the allocation of Local Area Capacity Resource obligations will be as follows: $(\sum \text{Local Capacity Area MW in TAC Area from the Local Capacity Technical Study}) * (\text{LSE Demand in TAC Area at CAISO annual coincident peak Demand}) / (\text{Total TAC Area Demand at the time of CAISO annual coincident peak Demand})$. This will result in a MW responsibility for each Load Serving Entity for each TAC Area in which the LSE serves Load. The LSE may meet its MW responsibility, as assigned under this Section, for each TAC Area in which the LSE serves Load by procurement of that MW quantity in any Local Capacity Area in the TAC Area.

(b) For Scheduling Coordinators for Non-CPUC Load Serving Entities, the Local Capacity Area Resource obligation will be allocated based on Section 40.3.2(a) above.

(c) For Scheduling Coordinators for CPUC Load Serving Entities, the CAISO will allocate the Local Capacity Area Resource obligation based on an allocation methodology, if any, adopted by the CPUC. However, if the allocation methodology adopted by the CPUC does not fully allocate the total sum of each CPUC Load Serving Entity's proportionate share calculated under Section 40.3.2(a), the CAISO will allocate the difference to all Scheduling Coordinators for CPUC Load Serving Entities in accordance with their proportionate share calculated under 40.3.2(a). If the CPUC does not adopt an allocation methodology, the CAISO will allocate Local Capacity Area Resources to Scheduling Coordinators for CPUC Load Serving Entities based on Section 40.3.2(a).

Once the CAISO has allocated the total responsibility for Local Capacity Area Resources, the CAISO will inform the Scheduling Coordinator for each LSE of the LSE's specific allocated responsibility for Local Capacity Area Resources in each TAC Area in which the LSE serves Load.

40.4.7 Submission Of Supply Plans

40.4.7.1 Schedule for Submission of Supply Plans

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with annual and monthly Supply Plans, as follows:

- (a) The annual Supply Plan shall be submitted to the CAISO on the schedule set forth in the Business Practice Manual and shall verify their agreement to provide Resource Adequacy Capacity during the next Resource Adequacy Compliance Year.
- (b) The monthly Supply Plans or the same information as required to be included in the monthly Supply Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual, and shall verify their agreement to provide Resource Adequacy Capacity during that resource adequacy month.
- (c) The Scheduling Coordinator for the Resource Adequacy Resource may submit, at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Supply Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Supply Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource Adequacy Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.
- (d) The monthly Supply Plan may indicate the willingness of the resource to offer capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43, and provide the identity of the resource, the available capacity amount, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual.

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40.7 Compliance

The CAISO will evaluate Resource Adequacy Plans and Supply Plans as follows:

- (a) The CAISO will evaluate whether each annual and monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates Resource Adequacy Capacity sufficient to satisfy the Load Serving Entity's (i) allocated responsibility for Local Capacity Area Resources under Section 40.3.2 and (ii) applicable Demand and Reserve Margin requirements. If the CAISO determines that a Resource Adequacy Plan does not demonstrate Local Capacity Area Resources sufficient to meet its allocated responsibility under Section 40.3.2, compliance with applicable Demand and Reserve Margin requirements, or compliance with any other resource adequacy requirement in this Section 40 or adopted by the CPUC, Local Regulatory Authority, or federal agency, as applicable, the CAISO will notify the relevant Scheduling Coordinator, CPUC, Local Regulatory Authority, or federal agency with jurisdiction over the relevant Load Serving Entity, or in the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), the relevant Scheduling Coordinators, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons the CAISO believes a deficiency exists. If the deficiency relates to the demonstration of Local Capacity Area Resources in a Load Serving Entity's annual Resource Adequacy Plan, and the CAISO does not provide a written notice of resolution of the deficiency as set forth in the Business Practice Manual, the Scheduling Coordinator for the Load Serving Entity may demonstrate that the identified deficiency is cured by submitting a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year. For all other identified deficiencies, at least ten (10) days prior the effective month of the relevant Resource Adequacy Plan, the Scheduling Coordinator for the Load Serving Entity shall (i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan or (ii) advise the CAISO that the CPUC, Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.

- (b) The CAISO will evaluate whether each monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates operationally available Resource Adequacy Capacity, excluding capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month, that is equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. For each day of the month where the CAISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, if a monthly Resource Adequacy Plan (i) includes capacity scheduled to take an Approved Maintenance Outage on that day that has not been replaced pursuant to Sections 9.3.1.3.1, or 9.3.1.3.2, and (ii) does not demonstrate operationally available Resource Adequacy Capacity equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin, the CAISO will require outage replacement and will provide notice of the outage replacement requirement to the Local Regulatory Authority, the Scheduling Coordinator for the Load Serving Entity, and the Scheduling Coordinator for the Resource Adequacy Resource scheduled to take the Approved Maintenance Outage. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons why the CAISO believes an outage replacement requirement exists. At least eleven (11) days prior to the resource adequacy month, the Scheduling Coordinator for either the Load Serving Entity or the Resource Adequacy Resource may demonstrate that the identified outage replacement requirement is cured by submitting to the CAISO a revision or update to the monthly Resource Adequacy Plan or Supply Plan, as applicable. If neither the Scheduling Coordinator for the Load Serving Entity nor the Scheduling Coordinator for the Resource Adequacy Resource timely advises the CAISO that the identified outage replacement requirement is cured, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A.
- (c) In the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), if resolved, the relevant Scheduling Coordinator(s) must provide the CAISO with revised

Resource Adequacy Plan(s) or Supply Plans, as applicable, at least ten (10) days prior to the effective month. If the CAISO is not advised that the deficiency or mismatch is resolved at least ten (10) days prior to the effective month, the CAISO will use the information contained in the Supply Plan to set the obligations of Resource Adequacy Resources under this Section 40 and/or to assign any costs incurred under this Section 40 and Section 43A.

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40.9.3.4 Treatment of Maintenance Outages

- (a) **Replacement Not Required.** The RAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity --
- (1) with an Approved Maintenance Outage or pending request for a Maintenance Outage as of 45 days prior to the start date of the Resource Adequacy month; however any subsequent incremental increase in the MWs or duration of the outage will be subject to RAIM unless RA Replacement Capacity for the incremental outage is required and provided or is not required; or
 - (2) on an Approved Maintenance Outage during the Resource Adequacy month that does not require RA Replacement Capacity under Section 9.3.1.3.3.
- (b) **Replacement Requirement Provided.** For each Maintenance Outage that a Resource Adequacy Resource requests less than 45 days prior to the start of the relevant resource adequacy month and that requires RA Replacement Capacity --
- (1) the RAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource provides RA Replacement Capacity for that outage as required under Section 9.3.1.3.3; and
 - (2) the RAIM Availability Assessment for the replacement resource includes the capacity, duration, and must-offer requirement for the RA Replacement Capacity commitment.
- (c) **Replacement Requirement Not Provided.** For each Maintenance Outage that a Resource

Adequacy Resource requests less than 45 days prior to the start of the relevant resource adequacy month, the RAAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource does not provide RA Replacement Capacity for the outage as required under Section 9.3.1.3.3.

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40.9.3.5 Treatment of Forced Outages

(a) RA Substitute Capacity - Local And System

(1) The RAAIM Availability Assessment for a Resource Adequacy Resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6.

(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity.

(b) RA Substitute Capacity - Flexible

(1) The RAAIM Availability Assessment for a Flexible RA Resource includes the capacity, duration, and must-offer requirement for Flexible RA Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for that outage in accordance with Section 40.9.3.6.

(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity.

(3) For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement.

(c) Exclusions from RAAIM. The RAAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage in a nature of work category relating to an administrative action by

the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.

(d) Scheduling Coordinators for Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10 shall report outages and de-rates in accordance with the process set forth the Business Practice Manual.

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40.9.3.6 Substitute Capacity

(a) Substitution

(1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage or de-rate.

(2) If the Resource Adequacy Resource on outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) Availability

(1) RA Substitute Capacity must be operationally available to the CAISO:

(2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.

(3) RA Replacement Capacity, RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.

(4) RA Substitute Capacity shall not qualify to be RA Replacement Capacity, RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.

(5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.3, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.

(6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) Timing of Substitution Request

(1) **Day-Ahead Market.** Requests for substitution in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.

(2) **Real-Time Market.** Requests for substitution in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

40.9.3.6.1 RA Substitute Capacity From A Single Resource

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on a Forced Outage or de-rate may provide RA Substitute Capacity for that capacity from a single resource.

(b) Local Capacity Area Resource Substitution

(1) Pre-Qualified Substitution.

(A) **Annual Process.** The CAISO will annually conduct a process to assess the eligibility of resources to pre-qualify as RA Substitute Capacity for Local Capacity Resource Adequacy Resources. The CAISO will publish a list of the pre-qualified resources in accordance with the timeline in the Business Practice Manual.

(B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy Resource

for which it could substitute.

(C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in accordance with Section 40.9.3.6(c).

(D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(1)(C) and 40.9.3.6(b).

(2) **Non-Pre-Qualified Substitution.**

(A) **Day-Ahead Market.** The Scheduling Coordinator for a Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute a non-pre-qualified resource only in the Day-Ahead Market.

(B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource must submit a timely substitution request in accordance with Section 40.9.3.6(c), and the alternate resource must be located in the same Local Capacity Area.

(C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(2)(A) and (B), and 40.9.3.6(b).

(c) **Non-Local Capacity Area Resource Substitution**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.1(c)(1) and 40.9.3.6(b).

(d) **External Resources**

(1) **Request.** To use a Dynamic System Resource, Non-Dynamic System Resource, NRS-

RA Resource, or Pseudo-Tie as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource is external to the CAISO Balancing Authority Area (including Pseudo-Ties), the Scheduling Coordinator for the resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meets the requirements in Sections 40.9.3.6.1(d)(1) and 40.9.3.6(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable requirements in Sections 40.9.3.6.1(e) and 40.9.3.6(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the highest quality Flexible Capacity Category for the MWs of the Flexible RA Capacity commitments of the resource on outage and the alternate resource.

40.9.3.6.2 RA Substitute Capacity From Multiple Resources

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) **Local Capacity Area Resource Substitution**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling

Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c) if any of the alternate resources are not pre-qualified to substitute for the resource on the outage; however, if all of the alternate resources are pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

(2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.2(b)(1) and 40.9.3.6(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity Area as the Resource Adequacy Resource.

(c) **Non-Local Capacity Area Resources**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if all of the alternate resources meet the requirements in Sections 40.9.3.6.2(c)(1) and 40.9.3.6(c).

(d) **External Resources**

(1) **Request.** To use multiple Dynamic System Resources, Non-Dynamic System Resources, NRS-RA Resources, or Pseudo-Ties as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resources are external to the CAISO Balancing Authority Area (including Pseudo-Ties), and the Scheduling Coordinator of each alternate resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meet the requirements in Sections 40.9.3.6.e(d)(1) and 40.9.3.6(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources must be located in the CAISO Balancing Authority Area, which does not include a Pseudo-Tie of a Generating Unit or a Resource-Specific System Resource.

(2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.3.6.2(d)(1) and 40.9.3.6(c).

40.9.3.6.3 Multiple Substitution by One Resource. The Scheduling Coordinator for a resource already providing RA Substitute Capacity may provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on a Forced Outage or de-rate, subject to approval by the CAISO pursuant to Section 40.9.3.6.1 or 40.9.3.6.2.

40.9.3.6.4 Resource Adequacy Obligation. To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40 applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be released from this obligation and the substitution requirements in Section 40.9 -

(a) at the end of the approved substitution period; or

(b) upon request by either the Scheduling Coordinator for the resource on Forced Outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in accordance with the process set forth in the Business Practice Manual.

40.9.3.6.5 Treatment of Unbid Capacity. If the Scheduling Coordinator for RA Substitute Capacity does not submit Bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO --

(1) will treat the unbid capacity as unavailable for purposes of Section 40.9; and

(2) will reflect that unavailability in the RAIM availability calculation for the Resource Adequacy Resource providing the RA Substitute Capacity.

40.9.4 Availability Assessment

- (a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on --
- (1) the availability assessment of the resource's minimum daily availability of local and/or system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping Resource Adequacy commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;
 - (2) including the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage, except to the extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6, or the Forced Outage is excluded from RAAIM under Section 40.9.3.5;
 - (3) including the capacity, duration, and must-offer requirement for any RA Substitute Capacity, RA Replacement Capacity, or CPM Capacity the resource is committed to provide; and
 - (4) excluding the Maintenance Outages specified in Section 40.9.3.4.
- (b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly average availability.
- (c) If the resource is committed to provide local and/or system RA capacity and Flexible RA Capacity in a month, but does not provide both for the full month, the CAISO prorates the number of days that local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

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40.10.5 Flexible RA Capacity Plans

40.10.5.1 LSE Flexible RA Capacity Plans

- (a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly LSE Flexible RA Capacity Plans for each Load Serving Entity it represents.

(b) **Annual Plan.** Each annual LSE Flexible RA Capacity Plan must -

- (1) demonstrate that the Load Serving Entity has procured for each month at least 90 percent of the annual Flexible RA Capacity requirement determined by the CAISO; or the amount of Flexible RA Capacity required by the Load Serving Entity's Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
- (2) identify the resources the Load Serving Entity intends to rely on to provide the Flexible RA Capacity, but need not identify the flexible resource adequacy categories; and
- (3) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(c) **Monthly Plan.** The monthly LSE Flexible RA Capacity Plan must --

- (1) demonstrate that the Load Serving Entity procured 100 percent of the total monthly Flexible RA Capacity requirement determined by the CAISO; or the monthly amount of Flexible RA Capacity required by the Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;
- (2) demonstrate that the Load Serving Entity met the total monthly requirement determined by the CAISO within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category; or only if the Local Regulatory Authority has established its own flexible capacity requirement, show that the Load Serving Entity has met the total monthly requirement determined by the Local Regulatory Authority within the minimum or maximum quantity for each Flexible Capacity Category required by the Local Regulatory Authority, if applicable;
- (3) identify all resources the Load Serving Entity will rely on to provide the Flexible RA Capacity and for each resource specify the Flexible Capacity Category in which the Flexible RA Capacity will be provided; and
- (4) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 11 days in advance of the first day of the month covered by the plan, a revision to its monthly LSE Flexible RA Capacity Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly LSE Flexible RA Capacity Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

40.10.5.1.1 Load-Following MSS

(1) Each Load-following MSS Load Serving Entity for which the CAISO has calculated an allocable share of the Flexible Capacity Need under Section 40.10.2.2 must submit annual and monthly LSE Flexible RA Capacity Plans pursuant to this Section 40.10.5.1 to identify the Flexible RA Capacity it is using to satisfy such requirement.

(2) The Load-following MSS must increase the Flexible RA Capacity in its monthly plan by the MW amount of Capacity for a Variable Energy Resource that is initially shown as being included in the Load-following MSS Load Serving Entity's resource portfolio in the information required pursuant to Section 40.10.1.2, but is subsequently not included in the current MSS resource portfolio at the time the monthly LSE Flexible RA Capacity Plan is due for the applicable month.

40.10.5.2 Resource Flexible RA Capacity Plans

(a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly Resource Flexible RA Capacity Plans for each resource it represents that provides Flexible RA Capacity; except that an annual plan is not required for 2015.

(b) **Annual Plan.** The annual Resource Flexible RA Capacity Plan shall --

(1) verify the resource's agreement to provide Flexible RA Capacity during the next Resource Adequacy Compliance Year; and

(2) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(c) **Monthly Plan.** The monthly Resource Flexible RA Capacity Plan shall --

- (1) verify the resource's agreement to provide Flexible RA Capacity during the month;
 - (2) include an affirmative representation by the Scheduling Coordinator submitting the plan that the CAISO is entitled to rely on the accuracy of the information provided in the plan to perform those functions set forth in this Section 40; and
 - (3) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.
- (d) **Correction to Monthly Plan.** The Scheduling Coordinator for the resource may correct an error in the plan by submitting a revision to its monthly Resource Flexible RA Capacity Plan at any time from 45 days through 11 days in advance of the first day of the month covered by the plan. The CAISO will not accept any revisions to a monthly Resource Flexible RA Capacity Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

40.10.5.3 Review of Flexible RA Capacity Plans

(a) Validation For Deficiency In An Individual LSE Plan.

- (1) If the Local Regulatory Authority has not established its own flexible capacity procurement requirements, the CAISO will validate the annual and monthly LSE Flexible RA Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities, and will use the Effective Flexible Capacity value for each resource calculated under Section 40.10.4. The CAISO will determine whether each Load Serving Entity met its annual or monthly total Flexible RA Capacity Requirement, and for the monthly LSE Flexible RA Capacity Plan, whether it met the total monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category.
- (2) If the Local Regulatory Authority has established its own flexible capacity procurement requirements, the CAISO will not validate the individual LSE Flexible Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities.

(b) Identification of Discrepancy. The CAISO will compare all LSE Flexible RA Capacity Plans and

Resource Flexible RA Capacity Plans to identify any discrepancy in the Resource Adequacy Resources listed or the amount of the Resource Adequacy Capacity committed.

(c) Evaluation For Cumulative Deficiency.

(1) The CAISO will evaluate the annual LSE Flexible RA Capacity Plans of all Load Serving Entities on a cumulative basis to determine whether the total amount of Flexible RA Capacity shown in the plans meets 90 percent of the annual Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(a).

(2) The CAISO will evaluate the monthly Flexible RA Capacity Plans of all Load Serving Entities to determine whether (i) the total amount of Flexible RA Capacity shown in the plans, limited to the maximum monthly requirement for each category, meets the applicable monthly Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(b)(1); or (ii) the total amount of Flexible RA Capacity shown in the base ramping Flexible Capacity Category in the plans meets the minimum monthly requirement for the base ramping Flexible Capacity Category determined by the CAISO pursuant to Section 40.10.1.5 or whether a cumulative deficiency may exist under Section 43.2.7(b)(2).

(d) Calculation of Flexible RA Capacity. The CAISO will calculate the amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans using the MW amount of Flexible RA Capacity for each resource designated in a plan as a Flexible RA Capacity Resource up to the Effective Flexible Capacity value for the resource calculated under Section 40.10.4.

(e) Allocated Flexible RA Capacity Requirement. The CAISO will calculate the Load Serving Entity's allocated annual and monthly Flexible RA Capacity Requirement --

(1) For Load Serving Entities within a Local Regulatory Authority that has not adopted its own allocation methodology, the CAISO will calculate the Load Serving Entity's allocated requirement based on the CAISO's allocation methodology set forth in Section 40.10.2.

(2) For Load Serving Entities within a Local Regulatory Authority that has adopted its own allocation methodology, the CAISO will use that Local Regulatory Authority's

methodology for the Local Regulatory Authority's jurisdictional Load Serving Entities.

40.10.5.4 Deficiency in LSE Flexible RA Capacity Plan

(a) **Finding and Notification.** If the CAISO's validation under Section 40.10.5.3(a) finds either (i) that the total amount of Flexible RA Capacity included in an annual or monthly LSE Flexible RA Capacity Plan is not sufficient to satisfy the Load Serving Entity's allocated Flexible RA Capacity Requirement or (ii) that the total monthly requirement in a monthly LSE Flexible RA Capacity Plan was not met within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, the CAISO will --

- (1) notify the relevant Scheduling Coordinator, and the Local Regulatory Authority or federal agency with jurisdiction over the relevant Load Serving Entity, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and
- (2) provide the notice at least 25 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a deficiency exists.

(b) **Resolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall -

- (1) demonstrate, no less than 11 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan, or
- (2) advise the CAISO that the Load Serving Entity's Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.

(c) **Unresolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.5 Discrepancy Between Flexible RA Capacity Plans.

(a) **Finding and Notification.** If the CAISO's review under Section 40.10.5.3(b) finds a discrepancy between an LSE Flexible RA Capacity Plan and a Resource Flexible RA Capacity Plan, the

CAISO will --

(1) notify the relevant Scheduling Coordinators of the mismatch in an attempt to resolve the discrepancy in accordance with the procedures set forth in the Business Practice Manual; and

(2) provide the notice at least 25 days in advance of the first day of the month covered by the plans and include the reasons the CAISO believes a discrepancy exists.

(b) **Resolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and the discrepancy is resolved, the Scheduling Coordinator must provide the CAISO with a revised LSE Flexible RA Capacity Plan or Resource Flexible RA Capacity Plan, as applicable, no less than 11 days prior to the first day of the month covered by the plans.

(c) **Unresolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and is not advised that the discrepancy is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

40.10.5.6 LRA Deficiency.

(a) **Finding and Notification.** If the CAISO's evaluation under Section 40.10.5.3(c) finds a cumulative deficiency in Flexible RA Capacity, the CAISO will --

(1) identify each Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need using the cumulative amount of Flexible RA Capacity that the Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total and, for the monthly Flexible RA Capacity Plans, in each Flexible Capacity Category;

(2) identify each Load Serving Entity that (i) is subject to the jurisdiction of a Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need under Section 40.10.5.6, and (ii) did not include sufficient Flexible RA Capacity in an annual or monthly plan to meet its allocated Flexible RA Capacity Requirement or did not meet the monthly requirement within the minimum or maximum quantity, as applicable,

for each Flexible Capacity Category, based on the allocation methodology of the Local Regulatory Authority if it has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities;

(3) notify each Local Regulatory Authority identified under Section 40.10.5.6(a)(1) and the Scheduling Coordinator for each Load Serving Entity identified under Section 40.10.5.6(a)(2) of the cumulative deficiency in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and

(4) provide the notice at least 25 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a cumulative deficiency exists.

(b) **Resolved Deficiency.** If the CAISO provides a notice of cumulative deficiency under Section 40.10.5.6(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall demonstrate, no less than 11 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan.

(c) **Unresolved Deficiency.** If the CAISO provides a notice of deficiency under Section 40.10.5.6(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

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43A.8.8 Allocation of Flexible Capacity CPM Costs

(a) Calculation of Deficiency by LRA.

(1) The CAISO will determine whether each Local Regulatory Authority met its allocable share of the Flexible Capacity Need based on the cumulative amount of Flexible RA Capacity that Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total, and included in their monthly Flexible RA Capacity Plans for each Flexible Capacity Category.

(2) The CAISO will calculate the total amount of Flexible RA Capacity included in the annual

and monthly Flexible RA Capacity Plans collectively for all Load Serving Entities within the Local Regulatory Authority, and the total amount included in the monthly Flexible RA Capacity Plans for each Flexible Capacity Category using the minimum or maximum quantity, as applicable, for each category, and using the Effective Flexible Capacity value calculated under Section 40.10.4 for each resource designated in a plan as a Flexible RA Capacity Resource.

(b) Allocation By CAISO Method.

(1) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, in total and in each Flexible Capacity Category, meets or exceeds the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, the CAISO will not allocate any of the Flexible Capacity CPM costs to the Scheduling Coordinators for those Load Serving Entities.

(2) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, either in total or for a Flexible Capacity Category, is less than the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, and that Local Authority has not established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will allocate the Flexible Capacity CPM costs proportionately to the Scheduling Coordinator of each jurisdictional Load Serving Entity that failed to meet its procurement obligation.

(c) Allocation by Local Regulatory Authority Method. If Load Serving Entities jurisdictional to a Local Regulatory Authority have a cumulative deficiency under Section 43A.8.8(a) and the Local Regulatory Authority has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will use the Local Regulatory Authority's methodology to allocate the Flexible Capacity CPM costs to the Scheduling Coordinator of each Load Serving Entity that is jurisdictional to that Local Regulatory Authority and that failed to meet its procurement obligation. If the Local Regulatory Authority does not

notify the CAISO of its allocation method by the deadline established in the relevant Business Practice Manual, then the CAISO allocates Flexible Capacity CPM costs using its default allocation methodology under Section 43A.8.8(b)(2).

(d) **Reduction of Cost Allocation.** If the CAISO issues a Flexible Capacity CPM designation, a Scheduling Coordinator for a Load Serving Entity that was deficient, but provided additional Flexible RA Capacity in a revised annual or monthly Flexible RA Capacity Plan consistent with the Market Notice under Section 43A.2.7.1 --

(1) will be not be allocated a share of the Flexible Capacity CPM procurement costs if the additional Flexible RA Capacity included in that LSE's revised LSE Flexible RA Capacity Plan resolved the total deficiency of that Load Serving Entity; or

(2) will be allocated a share of the Flexible Capacity CPM procurement costs on a proportionate basis to the extent that Load Serving Entity has a remaining partial deficiency.

* * * *

- Non-Specified RA Replacement Capacity

Capacity the Load Serving Entity procured that is capable of providing Resource Adequacy Capacity, but not designated as Resource Adequacy Capacity in the Load Serving Entity's monthly Resource Adequacy Plan for the month.

- RA Replacement Capacity

Specified RA Replacement Capacity, Non-Specified RA Replacement Capacity, or capacity that is not Resource Adequacy Capacity, CPM Capacity, or capacity under an RMR contract, that replaces Resource Adequacy Capacity that is not operationally available to the CAISO due to a Maintenance Outage, an RA Maintenance Outage With Replacement or a Forced Outage approved under Section 9.3.1.3.3.1(c)(4).

- Specified RA Replacement Capacity

RA Replacement Capacity specified by the Load Serving Entity to replace specific Resource Adequacy

Capacity included in its monthly Resource Adequacy Plan, for all or a portion of the period that the Resource Adequacy Capacity will not be operationally available to the CAISO during the month due to an Approved Maintenance Outage.

- System Total Available RA Capacity

The system total Resource Adequacy Capacity provided in the Resource Adequacy Plans, including the total MW of Specified RA Replacement Capacity accepted by the CAISO, less the total MW of unreplaced capacity in the Resource Adequacy Plans that is scheduled to take an Approved Maintenance Outage during the month.

**Attachment C – Board of Governors Memo on RSI Phase 1
Reliability Services Phase 1B and Phase 2 Tariff Amendment
California Independent System Operator Corporation**

Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market and Infrastructure Development

Date: March 19, 2015

Re: **Decision on reliability services proposal phase 1**

This memorandum requires Board action.

EXECUTIVE SUMMARY

California's resource planners are preparing for unprecedented changes to the bulk electric system resulting from the significant and growing amount of variable energy and other resources that have, and will continue, to change the ISO's operational needs. Although the current reliability framework has provided for reliable operation of the grid, there is an acknowledged gap in this framework to address changing reliability needs. To address these needs, Management has undertaken the reliability services initiative to further evolve the ISO's resource adequacy rules. The changes proposed are designed to ensure that sufficient resources with the right capabilities are available and offered into the ISO market to meet local, flexible, and system needs.

The reliability services initiative is a two-phase, multi-year effort to address the ISO's rules and processes surrounding resource adequacy (RA) resources. Management is bringing the first phase of the initiative to the board for a decision. The first phase focuses on RA rules and processes that enhance and streamline the current processes to meet the needs of an increasingly dynamic grid. These changes include: (1) enhancements to further integrate preferred resources into the grid; (2) a new availability incentive mechanism to encourage greater availability from RA resources including demand response and use-limited resources; and finally, (3) revisions to RA outage rules to streamline ISO processes and provide a platform for flexible RA outage rules.

The proposed new availability incentive mechanism significantly changes how RA resources are treated and assessed as available. The new outage rules will require significant implementation work, affect contracting, and involve coordination with the CPUC. Therefore, Management proposes to stage the FERC filing and the implementation of the planned outage rule proposal over the next two years.

The second phase of the reliability services initiative will begin in the first half of 2015. The scope of that phase will include enhanced flexible RA requirements and flexible RA planned outage rules. The ISO will conduct and use transparent flexible capacity needs studies to propose comprehensive flexible RA requirements to replace the interim requirements established last year. This will include an assessment of the ability of intertie resources to provide a portion of the ISO's flexible capacity needs and the need for a downward flexible product. The ISO's studies will look more closely at the need to address operational concerns associated with over-generation, including a review of the associated minimum operating level run times that come with many resources, and the need for ramping capabilities for time intervals less than three hours.

Management proposes the following motion:

Moved, that the ISO Board of Governors approves the phase 1 of the reliability services proposal, as described in the memorandum dated March 19, 2015; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.

DISCUSSION AND ANALYSIS

Background

In August 2014, FERC approved the ISO's proposal for a flexible RA requirement, compliance categories, and associated must-offers for the 2015 RA compliance year. The ISO created flexible RA to accommodate the increasing amount of variable energy resources on the ISO grid. Though a good interim measure, RA products alone are not enough to ensure grid reliability through this period of robust change. Additional rules are needed to integrate flexible RA into the energy market and to streamline processes in advance of adding the additional complexity that comes from the addition of flexible RA requirements.

The current RA availability mechanism does not assess flexible RA availability or fully assess use-limited and preferred resource availability. Therefore, Management proposes a new availability incentive mechanism that will address these deficiencies as well as create a new price for the charge and payment.

Similarly, the ISO's default eligibility criteria, must-offer requirements, and outage rules were not set up to accommodate the increase in preferred resources and flexible RA requirements. Therefore, Management also proposes enhancements and changes to these rules.

Objectives

Management's objective under this initiative is to create a lasting framework to ensure sufficient resources with the right capabilities are available and offered into the ISO

market to meet local, flexible, and system operational needs. Eligibility requirements and must offer obligations should reflect the ISO's reliability need and be consistent as possible across resource types. Likewise, RA resources' compliance with the must-offer obligations should be similar, while still accounting for individual resource adequacy counting methodologies and obligations. Finally, outage rules should be simple and based on a defined reliability purpose.

Management proposes default eligibility criteria and must offer obligations to further integrate preferred resources into the grid

As newer technologies produce and deliver energy onto the grid, the ISO must enhance or establish default qualifying capacity minimum eligibility criteria for system, local, and flexible RA capacity. This will allow a more diverse set of resource types to provide RA capacity. Management proposes default qualifying capacity minimum eligibility criteria for distributed energy resources, non-generator resources, and enhancements for proxy demand resources, as well as the must-offer rules where required for each of these resource types. The current must-offer rules can be improved by applying them in a more standardized manner, and making them more universally accessible, across all resource types, including use-limited resources. Management also proposes clarifications to the must-offer obligations for distributed generation facilities and non-generating resources.

Management also proposes new must-offer requirements related to bid insertion, ancillary service participation, and residual unit commitment bidding from RA resources. These new requirements are linked to the use-limited definition proposed in the commitment cost enhancements phase two initiative, which is being separately presented to the Board for decision. The new must offer requirements exempt certain resource types that are no longer considered use-limited, but cannot automatically be accommodated under the full must-offer requirements without additional policy and review.

A new availability incentive mechanism will increase incentives for RA capacity to participate in the ISO market

Management proposes a new availability incentive mechanism for RA capacity to participate in the ISO market. The proposed incentive mechanism assesses whether RA resources are offered into the ISO market consistent with their must-offer obligation. The mechanism compares how the resource was supposed to bid into the energy market under its RA obligation to how the resource actually bid into the energy market. Management believes this framework will be adaptable to future flexible RA requirements and provides a foundation for use-limited and preferred resources to be assessed equitably to other resource types.

The ISO proposes three main design features for the new availability incentive mechanism:

- Calculate availability based on a resource's offers into the energy market,
- Assess this bid-based availability against a fixed availability percentage threshold where resources that perform under the availability threshold will be charged a penalty, and resources that perform over the availability threshold will be paid, and
- Establish availability charges and incentive payments using a new availability incentive price of \$3.79/kW-month to more equitably calculate monthly resource availability penalties and payments across resources. This includes decreasing capacity exemptions from the availability mechanism and accounting for differences in the number of days a resource is committed as RA capacity.

Management proposes a two-month advisory period for the availability incentive mechanism that will begin with the implementation date. The advisory period will allow time for market participants and the ISO to make any final adjustments needed to accommodate the new mechanism before actual settlements occur.

Connection to commitment cost enhancement - phase two initiative

Management proposes that the availability incentive mechanism assess in each must-offer hour whether use-limited resources are offered into the energy market. To efficiently dispatch use limited resources, Management is developing an opportunity cost methodology in phase three of the commitment cost enhancements initiative that will allow use-limited resources greater control over the start-up and run times using economic bidding. Until the opportunity cost methodology is implemented, the ISO will allow use-limited resources to put in an outage that will exempt the resource from the availability incentive mechanism. Resources may only use this outage to manage use-limitations and not to reflect a mechanical forced outage.

New rules for providing additional capacity during forced outages will increase reliability and decrease market participant costs

Management proposes to enhance forced outage rules to incent maximum participation from resources and reduce transaction costs for all parties.

RA resources are expected to be available during the entire month. The availability incentive mechanism provides incentives for scheduling coordinators to undertake actions to reduce the occurrences of forced outages in a month. However, the ISO will penalize the resource if outages exceed the expected level, should a forced outage occur. To allow scheduling coordinators the ability to manage resource non-availability penalties, the ISO has developed substitution rules that allow capacity from resources to "substitute" for RA capacity that has experienced a forced outage.

Today, there are many rules in place regarding the timing and rules related to substitute capacity. Management proposes to eliminate any rule that is unnecessary from a reliability perspective, which will result in a more streamlined substitution process. This

will provide for a wider range of resources to be quickly substituted for capacity that incurs a forced outage.

New rules for providing capacity during planned outages will serve as a platform for future flexible planned outage rules, increase transparency, and increase incentives for suppliers to notify the ISO about outages sooner

Prior to each month, the ISO performs an evaluation of RA resources included in load serving entities' RA plans and resource planned outage requests to ensure that sufficient resources will be available throughout the month. In the event that a planned outage results in a resource insufficiency, the ISO requires that the resource be replaced with another resource. The current monthly RA evaluation process is complex from the perspectives of both the ISO and market participants. After experience with the ISO's planned outage ("replacement") rules the ISO notes there is significant confusion and dissatisfaction among stakeholders. Some of these issues stem from the timing of when additional capacity is required, the distinction between whether the supplier or the LSE must provide the additional capacity, and which entity ultimately takes on the availability and procurement risk. Furthermore, the integration of flexible RA into the replacement and substitution rules will increase this complexity, potentially to the point that the rules could become unworkable from an internal processing standpoint.

To address these issues, Management proposes to simplify the process by changing the RA process timeline and moving the outage coordination obligation entirely onto the supplier. In addition, Management proposes other changes that will decrease over-procurement and simplify the entire planned outage process. Specifically, among other changes, Management proposes to cap the monthly local RA requirement at the system requirement, and allow suppliers to release planned outage capacity as RA capacity if an outage is canceled or moved.

POSITIONS OF THE PARTIES

Most parties either support or do not oppose the fundamental RA availability mechanism design that assesses availability based on RA resource offers into the ISO market. Two parties (NRG and SCE) object to the assessment of economic bidding for flexible RA resources within the mechanism. PG&E and the ISO Department of Market Monitoring believe that the RA availability mechanism price, which is set at 60 percent of the capacity procurement mechanism (CPM) soft-offer cap price, is too low and should be set at 100 percent of the CPM soft-offer cap price. They argue that this would better incent resources to provide substitute capacity during forced outages.

Management believes that the proposed price at 60 percent of the CPM soft-offer cap price strikes the right balance for incenting resources to meet their RA must-offer obligations while not being too high as to inefficiently increase RA contracting prices due to exorbitant risks of forced outage penalties. Furthermore, placing a high penalty price could also discourage resources from providing RA capacity due to the significant financial risk of a high penalty price. The CPM soft offer cap is a cap and therefore set at an extremely high price, which is significantly higher than current RA contract prices.

The availability incentive mechanism is intended to incent routine resource maintenance so that resources do not go on lengthy forced outages above the amount already planned for within the ISO's planning reserve margin. Therefore, Management contends there is no reliability need to set the availability incentive mechanism price so high that it distorts RA bilateral prices and ensures 100% substitution during forced outages.

Several parties oppose or question Management's proposal to exempt combined heat and power, wind, and solar resources from the availability incentive mechanism. The amount a combined heat and power resource can sell as RA from year to year is dependent on the output from the plant. In addition, these resources' contracts typically include penalties for non-performance. Therefore, these resources already have a strong incentive to perform and would be double penalized if not exempted from the proposed availability incentive mechanism.

Management also believes it is appropriate to exempt wind and solar resources from the availability incentive mechanism. Under the ISO's real-time market structure, wind and solar resources under the proposed availability incentive methodology would be assessed using the resources' forecasts as a baseline for comparison. In other words, absent the exemption, these resources could be rewarded for performing less than other resources. Finally, unlike conventional generation, the amount of RA capacity wind and solar resources may sell each year is based on historical output. Therefore, wind and solar have an added incentive to meet or exceed the ISO's must-offer obligation for RA resources.

Management proposes a minor adjustment to the local resource adequacy requirement. This change is necessary to accommodate the proposed planned outage rules. In the monthly and annual RA process, the ISO proposes to cap a load serving entity's local capacity RA requirement at that load serving entity's system RA requirement. This will not impact the current local capacity technical study methodology used to determine the load serving entity local capacity requirements each year. Certain stakeholders including PG&E, Calpine, and WPTF oppose this change as they feel it could negatively impact reliability in local areas during off-peak months.

Currently, during some months of the year, a load serving entity may be required to demonstrate local capacity in excess of its monthly peak demand and reserve margin. This occurs because the local requirement is determined for August and applied to all months in order to assure local reliability. Since the inception of the local capacity technical study, peak load requirements have become increasingly different from month to month. The impact of this is that there is a potential for the monthly local requirement to be greater than the monthly system requirement. Management believes that it is reasonable to require the total commitment of RA capacity up to a load serving entity's peak demand and reserve margin requirements. In months where the peak demand and reserve margin requirement is less than the local requirement, the ISO would still receive local resource adequacy commitment up to the updated forecasted peak demand and reserve margin for that month. Therefore, all committed capacity would be local capacity for these load-serving entities. There is no reliability reason why the ISO

should require additional local capacity beyond the peak demand and reserve margin requirements.

Attached is a detailed stakeholder comment matrix. The Market Surveillance Committee has provided a draft opinion on Management's proposal and will be voting on the opinion at its March 23, 2015 meeting.

CONCLUSION

Management requests that the Board approve the proposed reliability services design changes as described in this memorandum. The proposed changes provide significant reliability and process benefits that will further the ISO's ability to effectively integrate large amounts of renewable resources to meet state policy goals.

**Attachment D – Board of Governors Memo on RSI Phase 2
Reliability Services Phase 1B and Phase 2 Tariff Amendment
California Independent System Operator Corporation**



Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market & Infrastructure Development

Date: October 19, 2016

Re: **Decision on reliability services initiative phase 2 proposal**

This memorandum requires Board action.

EXECUTIVE SUMMARY

The western energy landscape continues to rapidly evolve towards a low-carbon grid that brings with it the challenge of maintaining reliability while managing a greater number of resources, a more diverse resource portfolio, and more variable loads and resources. Addressing this challenge requires a more rigorous and sophisticated approach to ensuring the ISO has the right mix of resource capabilities to reliably operate the system. If sufficient system, local, and flexible capacity are available to the ISO's day-ahead and real-time markets through forward procurement, then the ISO will have the resources necessary to meet system operational needs. The reliability services initiative – phase 2 (RSI 2) addresses a number of issues that pertain to resource adequacy (RA) processes that are necessary to effectively administer the RA program. Management proposes the Board approve the following two enhancements to the RA program:

Local and system RA capacity designation – Under current rules, an RA resource located in a local area that goes on a forced outage must substitute its capacity with another resource located in the same local area, regardless of whether the resource was procured to meet a local capacity requirement. Management proposes to allow resources procured as system capacity in a local area to no longer be required to provide substitute capacity in the same local area. The ISO will modify the RA showings and supply plan templates to allow entities to clearly designate and distinguish the capacity that is being used to meet local and system capacity requirements.

RA showing requirements for small load serving entities (LSEs) – Management proposes that LSEs whose flexible or local RA requirement is calculated to be less than one megawatt (MW) for all 12 months of the applicable RA compliance year will be considered to have an actual monthly flexible or local RA requirement of zero, and as

such the LSE will not be required to submit a flexible or local RA showing. This change will bring treatment of calculated flexible and local RA requirements of less than one MW into alignment with how calculated system requirements of less than one MW are currently treated.

Through the initiative, Management also identified two process enhancements that do not require Board approval, but are listed below for completeness:

Process to update effective flexible capacity (EFC) list during the year – The ISO will clarify the process by which a resource may change its EFC through the course of the RA year. The ISO will continue to perform the process manually until it implements an automated process in the fall of 2018.

RA showing tracking and notification – The ISO will track RA showings through a reporting tool in its RA business application and implement a communication process to ensure that all LSEs, regardless of size, are notified when they have not submitted a timely RA showing.

Management recommends the following motion:

Moved, that the ISO Board of Governors approves the reliability services initiative phase 2 proposal, as described in the memorandum dated October 19, 2016; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.

DISCUSSION AND ANALYSIS

Background

On March 26, 2015, the Board approved the RSI Phase 1 initiative, which included the RA availability incentive mechanism, a new availability incentive to replace the existing standard capacity product (SCP), and redesigned the rules for replacement and substitution of resources that go on planned and forced outages. Although RSI Phase 1 improved the availability and outage substitution and replacement rules in several ways, Management subsequently identified additional improvements in RSI 2. Management proposes the following RSI 2 enhancements.

Local and system RA capacity designation

The ISO's RA program requires LSEs to procure sufficient capacity in three categories: (1) system, (2) local, and (3) flexible. Management's proposal addresses an equity issue between system and local RA capacity that has been procured. Currently, RA

resources in local capacity areas that go on a forced outage must provide substitute capacity that is also located in a local capacity area or be subject to potential non-availability charges. Some stakeholders assert that the ISO should only require that the substitute capacity come from another local capacity resource if the resource has been explicitly procured to provide local RA capacity. These stakeholders argue that if the capacity on outage was procured to provide system RA capacity, the ISO should only require substitute capacity from another system resource to avoid non-availability charges.

Management proposes to modify the templates for annual and monthly RA showings provided by LSEs and the RA supply plans provided by scheduling coordinators (SCs) of the RA resources to require both entities to specify the MWs of capacity that have been procured to meet local and system RA capacity requirements. The ISO will use this new RA showing information to determine whether a resource that goes on a forced outage must substitute with system or local capacity. The ISO will validate local RA showings to verify that the SCs for resources and LSEs have accounted for local capacity consistently in both showings. If there is a discrepancy between the RA showing and supply plan, the ISO will notify both parties. If the discrepancy remains unresolved, the ISO will maintain its current practice of defaulting to the supply plan.

Management believes that this proposal will minimize the complexity associated with local capacity forced outage substitution rules. Additionally, Management believes that the proposal is a more equitable solution, because substitution requirements mirror the capacity category of the procured capacity.

RA showing requirements for small LSEs

Exemption from RA requirement

The tariff currently exempts small LSEs from all RA requirements if their measured demand (i.e., system RA requirement) for the previous year was less than one MW. This exemption is based on the challenge and cost associated with trying to procure less than one MW of capacity. However, currently, if a small LSE's calculated system requirement is over one MW, but its calculated flexible or local RA requirement is below one MW, the LSE is not exempt from flexible or local RA requirements and associated RA showings. Management proposes to align the treatment of calculated flexible and local RA requirements of less than one MW. LSEs whose flexible or local RA requirement is calculated to be less than one MW for all 12 months of the applicable RA compliance year will be considered to have an actual monthly flexible or local RA requirement of zero, and as such, the LSE will not be required to submit a flexible or local RA showing.

An LSE may have a flexible, local, or system RA requirement over one MW in one month and under one MW for the rest of the 11 months of the RA compliance year. Management proposes that an LSE would not be required to submit monthly system, local, or flexible RA showings where the LSE's RA requirement for that RA product in that month is less than one MW.

Although the ISO will not require LSEs with a RA requirement of less than one MW to submit a monthly RA showing for the months in which their RA requirement is less than one MW, the ISO will not exempt LSEs from their RA requirements where such requirements still apply. If there is a RA deficiency, the ISO will notify LSEs of the RA deficiency and provide them with an opportunity to cure the deficiency, just as it does today. If the LSE does not cure the deficiency, and the ISO exercises its backstop authority, the LSE will be subject to cost allocation for the capacity procured.

The ISO will also implement the following process enhancements which do not require Board approval, but are included to provide a comprehensive view of the outcome of this stakeholder initiative.

Process to update EFC list during the year

In the flexible resource adequacy criteria and must-offer obligation phase 1 stakeholder initiative, the ISO established the methodology for calculating a resource's EFC.¹ Specifically, the ISO calculates a resource's EFC annually using a resource's net qualifying capacity (NQC)² and other operational attributes of the resource. With flexible capacity requirements in place, Management has identified a need to improve the EFC calculation and change management process. Specifically, Management proposes to clarify the process by which a resource may change its EFC during the year. The ISO will manually update the EFC list until it implements an automated process in the fall of 2018.

The ISO will update a resource's EFC only upon request from the SC for the resource. If a non-dispatchable resource becomes dispatchable, the SC for that resource must request that the ISO review the EFC for the resource after the change takes effect. This also applies to changes to the NQC of a resource. The SC for a resource must request that the ISO review the EFC value either at the same time or after the SC submits the request to change the NQC value.

¹ EFC is the amount of a resource's capacity eligible to be counted towards meeting an LSE's flexible RA requirements.

² NQC is the net total capacity a resource is eligible to provide as system or local RA based on (1) testing and verification; (2) application of performance criteria; and (3) deliverability restrictions.

RA showing tracking and notification

Each year, LSEs are required to submit year-ahead RA showings. Monthly RA showings are currently due 45 days before the operating month. An LSE is allowed to submit monthly showings at the same time it submits its annual showings. An LSE that submits a monthly RA showing after 45 days prior to the operating month will incur a \$500 per day penalty until the monthly RA showing is submitted.

To help LSEs avoid incurring large penalties, the ISO will (1) track submission of RA showings through a reporting tool in the ISO's RA business application, and (2) implement a communication process to notify all LSEs, regardless of size, when they have not submitted a monthly RA showing to help them avoid penalties.

POSITIONS OF THE PARTIES

Calpine, California Department of Water Resources, Silicon Valley Power, Six Cities, NRG, and Southern California Edison either support or do not oppose the proposal to allow system capacity to substitute for capacity located in a local area that is shown as system capacity. They generally agree that the substitution proposal is more equitable than the existing approach because substitution requirements should mirror the capacity category of the procured capacity. The California Public Utilities Commission, San Diego Gas and Electric and Pacific Gas and Electric do not support the system and local designation because they believe that the unbundling of system and local capacity prioritizes compensation over the physical capability of a resource and creates the possibility that a resource may withhold bundled local capacity and force the ISO to procure backstop capacity. Additionally, stakeholders opposing the substitution proposal believe it will increase costs.

Management's proposal provides a mechanism by which an LSE can show the ISO the category of capacity it is relying on to meet its local capacity obligation, which will better align the substitution obligation with the category of capacity that was procured, *i.e.*, system or local. Management's proposal incentivizes LSEs to properly identify the resource as local RA capacity. If an LSE wishes to avoid any potential risks for ISO backstop procurement, it may do so by ensuring that resources in the local area are, in fact, shown as local RA and therefore have a substitution obligation (local for local) that mitigates potential risks of ISO backstop procurement. The proposal is a more equitable solution than the existing framework because substitution requirements mirror the capacity category of the procured capacity.

Six Cities, the Small Publicly Owned Utility Coalition, and Silicon Valley Power do not believe that the ISO's process improvements to track LSE showings and notify deficient LSEs goes far enough. Instead, these stakeholders believe that a proposal that Management initially considered wherein the ISO would automatically roll over RA showings would be a superior solution and minimize the risk of large penalties for late RA showings. Management does not agree with this position because the automation

process would potentially result in stale RA data that would simply be rolled forward from one month to the next. Management believes that its current proposal will provide an effective service to customers without the need to implement a costly and complex enhancement.

SDG&E does not support the ISO's second revised draft final proposal regarding RA showings for small LSEs that was posted September 16, 2016 as that proposal, in SDG&E's view, lacks clarity and specific details. To address SDG&E's concerns, subsequent to the September 16, 2016 posting, Management has provided additional details of the specifics of the proposal and how it will work, particularly relative to cost allocation if the ISO has to do backstop procurement.

Finally, the ISO Department of Market Monitoring provided comments supporting Management's proposal and have included their comments in their memorandum to the Board.

CONCLUSION

Management seeks Board approval of the reliability services initiative phase 2 proposal as described in this memorandum. The proposal enhances the ISO's RA processes by more equitably aligning substitution obligations, allowing updates to resources' EFCs, and providing relief to small LSEs regarding their RA obligations and showing requirements. Management believes that the proposal provides necessary enhancements to effectively administer the RA program.