



California Independent
System Operator Corporation

September 20, 2012

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. ER12-_____
Replacement Requirement for RA Maintenance Outages

Dear Secretary Bose:

The California Independent System Operator Corporation (“ISO”) electronically submits for filing proposed amendments to its tariff that will allow the ISO to better coordinate maintenance outages at resource adequacy (“RA”) resources, while ensuring that sufficient RA capacity is available each day to meet forecasted load and maintain grid reliability.¹ The proposed tariff modifications establish a replacement requirement for the scheduling coordinators of load serving entities, to the extent the ISO determines, under specified criteria, that RA capacity listed in their monthly RA plans must be replaced because it is scheduled for an approved maintenance outage during the month and will not be operationally available to the ISO. The proposed tariff modifications establish a replacement requirement for the operators of resources providing RA capacity that increases the likelihood that a request to schedule a new maintenance outage, or to reschedule an approved maintenance outage, during the month the resources are listed to provide resource adequacy service can be accommodated in the overall system outage plan, if the request includes equivalent replacement capacity. Without replacement capacity, the outage may be performed during off-peak hours or accommodated upon short notice if system conditions and the overall outage schedule provide an opportunity for the ISO to accommodate the outage without a detrimental effect on the efficient use and reliable operation of the grid.

The proposed tariff modifications also establish a new backstop mechanism whereby the ISO can procure backstop capacity in instances when RA capacity

¹ The ISO submits this tariff amendment pursuant to Section 205 of the Federal Power Act, 16 U.S.C. § 842d and Part 35 of the Commission’s regulations, 18 C.F.R. Part 35. Capitalized terms not otherwise defined herein have the same meanings as set forth in the ISO Tarff, Appendix A, Master Definitions Supplement.

specified in a monthly RA plan will be offline for an RA maintenance outage and such capacity has not been replaced, if necessary, under the replacement requirement. Specifically, the backstop provisions authorize the ISO to procure RA maintenance outage backstop capacity² for a minimum commitment of one day and a maximum commitment of 31 days, as needed, when the ISO determines that replacement is necessary but the scheduling coordinator for a load serving entity does not provide the required outage replacement capacity and the operator for the resource does not reschedule or cancel the approved maintenance outage.

The ISO's proposal in this proceeding creates a just and reasonable, resource adequacy and outage management replacement procedure that ensures sufficient RA capacity will be operationally available to reliably operate the grid and meet the load obligations of the load serving entities while minimizing ISO procurement of capacity through the backstop mechanism. The proposed replacement requirement and RA maintenance outage backstop capacity procurement will enhance the ISO's outage management capabilities and ability to maintain reliable system operations. The proposal is designed to: improve outage coordination management for the system overall and RA resources in particular; reinforce the fundamental purpose of the resource adequacy program, which is to ensure that sufficient resources are available where and when needed; and promote system reliability.

Further, the proposal is designed to meet the load obligations of the load serving entities and to allow suppliers flexibility in scheduling their maintenance outages, while minimizing the need for the ISO to procure RA maintenance outage backstop capacity. The ISO's proposal provides incentives for RA resources to schedule maintenance outages further in advance of the start date of the outage to avoid the possibility of a replacement requirement. This will improve the efficiency and effectiveness of the ISO's outage management.

The ISO requests that the Commission accept the tariff revisions proposed in the instant filing, without modification, suspension or hearing, so they become effective and can be implemented on November 20, 2012, which is 61 days after the date of this filing. The ISO will apply the proposed tariff modifications beginning with the resource adequacy month of January 2013, which coincides with the expiration of the California Public Utilities Commission's ("CPUC") replacement rule on December 31, 2012, as discussed below. The ISO requests that the proposed tariff modifications become effective on November 20, 2012 rather than January 1, 2013 because the revisions for the most part apply to the submission of the monthly RA plans and supply plans, and the ISO's review and validation of those plans, which occur before the start of the resource adequacy month. The ISO is requesting the effective date of November 20, 2012 in order for the revised provisions to be in effect when the monthly RA plans and supply plans are due on November 21, 2012, which is 41 days in advance of the January 2013 resource adequacy month.

² The proposed definition for RA maintenance outage backstop capacity is RA maintenance outage backstop capacity procured under Section 43.10.

For the resource adequacy month of January 2013 only, the ISO proposes that the monthly RA plans and supply plans be submitted no later than 41 days in advance of the month. Thereafter, the due date for the monthly plans will be 45 days prior to the month. The change in the due date for the resource adequacy month of January 2013 is necessary, based on the filing date of this tariff amendment, in order to allow for FERC's decision to issue and for the replacement requirement to become effective and apply to the submission of RA plans and the supply plans for that month. The proposed submission date of the monthly plans for January 2013 will afford market participants a few extra days to prepare their plans, and will shorten the ISO's time for review and validation of the plans by the same few days, but will not extend the remainder of the replacement requirement schedule.

I. BACKGROUND

A. CPUC Resource Adequacy Program Overview

The CPUC adopted the resource adequacy program in 2004 to meet two fundamental goals: (1) to provide sufficient RA capacity to the ISO when and where needed to support the safe and reliable operation of the ISO Controlled Grid in real time; and (2) to provide appropriate incentives for the siting and construction of new resources needed for reliability in the future. The structure of the program requires a unique cooperation between the ISO, and the CPUC and other local regulatory authorities. Although specific elements of the resource adequacy program have changed since its inception, the basic construct has remained unchanged: it is a one-year forward and monthly demonstration that load serving entities have sufficient capacity to meet their expected demand peak plus a planning reserve margin.

Under the CPUC's resource adequacy program, jurisdictional load serving entities, including energy service providers, must procure at least 90 percent of their RA requirement for the five summer months in compliance with a year-ahead forward commitment obligation. Additionally, if their load is located in any of the local capacity regions defined by the ISO, they must procure 100 percent of their need for local capacity for the entire year in the year-ahead timeframe. The 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. The CPUC-jurisdictional load serving entities demonstrate that they have procured the required RA capacity by submitting an annual RA plan and monthly RA plans. The local regulatory authority determines if the RA showing is sufficient to meet the RA requirements.

Each year the ISO's role in the resource adequacy process begins with the publication of 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 ISO balancing authority area and the total import capability for each import path allocated to each load serving entity. The information contained in these reports, along with generator data, is used to compile the annual Net Qualifying Capacity Report, which lists the net qualifying capacity of all participating generators and other generating units that request inclusion in the resource adequacy program for the following year.

Load serving entities use the Net Qualifying Capacity Report to identify resources eligible to contract for RA capacity to satisfy the resource adequacy obligations of the load serving entities. These requirements consist of the reserve margin established by the local regulatory authority and the local capacity area resource requirement. Scheduling coordinators for load serving entities must make the RA capacity they procure available to the ISO in accordance with the requirements of ISO Tariff Section 40.5 or Section 40.6, as applicable.

In the year-ahead and month-ahead timeframes, scheduling coordinators for the load serving entities are required to provide RA plans to the ISO demonstrating that their RA requirements will be met for that reporting period. Scheduling coordinators for the RA resources also submit year-ahead and monthly supply plans to the ISO that verify their commitment to provide the listed RA capacity. The ISO cross-validates the RA plans and supply plans to ensure that the RA requirements are being met. When a discrepancy exists between plans, the ISO advises the relevant scheduling coordinators and the CPUC in order for the error to be corrected.

The ISO's proposal in this proceeding will change the timing for scheduling coordinators to submit the monthly RA plans and supply plans. The proposed tariff modifications will change the due date for submitting the monthly plans from 30 days in advance of the resource adequacy month to 45 days in advance of the resource adequacy month. This additional time is needed by the ISO to undertake the outage management replacement process being established in new Section 9.3.1.3. As previously mentioned, for the resource adequacy month of January 2013, the ISO proposes that the monthly RA plans and supply plans be submitted no later than 41 days in advance of the month; they may be submitted earlier. The change in the due date for the resource adequacy month of January 2013 is necessary, based on the filing date of this tariff amendment, in order to allow for FERC's decision to issue and for the replacement requirement to become effective and apply to the submission of RA plans and the supply plans for that month. The due date for the monthly plans for the subsequent resource adequacy months will be 45 days prior to the month.

The proposed replacement requirement and change in the outage management process to consider resource adequacy reliability requirements are fundamental to maintaining the appropriate level of capacity, while still providing opportunities for needed maintenance. In addition, elements of the ISO's proposal are designed to provide incentives for RA resources to schedule maintenance outages further in advance of the start date of the outage. This will improve the efficiency and effectiveness of the ISO's outage management and will decrease the likelihood that the

outage may need replacement capacity.

B. CPUC Replacement Rule

As part of the resource adequacy program, the CPUC in decision D.06-07-031 (July 20, 2006), adopted the replacement rule that requires each jurisdictional load serving entity to meet its RA requirement with RA capacity that is available and not on an extended scheduled maintenance outage during a compliance month. The replacement rule provides a methodology for determining how scheduled outages of RA resources will be counted to assess whether a load serving entity has procured sufficient RA capacity to meet its monthly resource adequacy obligations. The replacement rule requires each jurisdictional load serving entity to procure additional capacity to meet its RA requirement when the availability of a RA resource during a month is significantly affected by a scheduled maintenance outage. Under the rule, a resource cannot be counted as RA capacity if the number of days it is scheduled for a maintenance outage during the month exceed 25 percent of the number of days in a summer month (May through September) or extend longer than two weeks in a non-summer month (October through April). A load serving entity that includes in its monthly RA plan a resource scheduled for a maintenance outage with an expected duration that exceeds the applicable seasonal limit has an obligation to procure replacement RA capacity for the capacity on outage. During validation of the resource adequacy filings, the CPUC Energy Division compares the filings with outage information to confirm that outages have been correctly counted or replaced.

After the replacement rule had been in effect for several years, questions about its efficacy were raised in successive annual CPUC resource adequacy proceedings. The load serving entities that supported eliminating the rule primarily argued that the replacement rule, in combination with the ISO's standard capacity product ("SCP"), limited the tradability of RA capacity. Some parties questioned whether the replacement rule provided the correct incentives for scheduling planned outages at resource adequacy resources or for replacing the capacity on outage. There was also concern that the criteria in the rule for determining whether a resource with a scheduled outage could be counted as RA capacity were overly generous and could undermine the resource adequacy program's objective of ensured that sufficient RA capacity will be available to the ISO when and where needed.

In decision D.11-06-022 (June 23, 2011), the CPUC found that the replacement rule should be terminated because it "stands in the way of the making the Standard Capacity Product commercially viable because LSEs still need to negotiate complex replacement provisions in each contract individually."³ The CPUC determined that the replacement rule should remain in effect for 2012 and terminate for compliance year 2013 and beyond. The CPUC strongly encouraged the ISO to work quickly with stakeholders to develop alternative procedures and tools to reliably operate the grid

³ D.11-06-022, p. 25.

without the current CPUC replacement rule.⁴

The CPUC's elimination of its replacement rule is the primary impetus for the ISO to develop the replacement requirement proposed in this filing. By eliminating the replacement rule, in the words of the CPUC, "LSEs are free to count units towards their RA obligations, even if the unit is impacted by a scheduled or forced generator outage."⁵ Absent the CPUC's replacement rule, jurisdictional load serving entities could fully count as RA capacity for a given month a resource that is on a maintenance outage for the entire month that it is obligated to provide resource adequacy service.

Although the ISO did not oppose the CPUC's decision to eliminate the replacement rule, the ISO had serious concerns about its demise without either a successor methodology or alternative measures in effect. Discontinuing the replacement rule, before other adequate means are in place to account for RA capacity on a scheduled maintenance outage, could compromise the objectives of the Commission's resource adequacy program and adversely impact system reliability unless costly backstop procurement is undertaken. It could also reduce the ISO's flexibility to approve outage requests due to potential limitations on available, effective capacity. The CAISO relies on replacement capacity being available for a unit on scheduled outage in order to more easily accommodate unanticipated outages and reduce cancellations or other schedule changes. The ISO's proposed replacement requirement was designed to address these concerns and enhance the outage management benefits that the predecessor CPUC rule provided.

C. ISO Outage Management Overview

The ISO provides resources open and non-discriminatory access to a long-distance, high-voltage transmission grid, comprised of nearly 26,000 circuit-miles of power lines. Operating the grid reliably and efficiently is one of the ISO's core responsibilities. Every five minutes the ISO forecasts electrical demand, accounts for operating reserves and dispatches the lowest cost power plant unit to meet demand while ensuring enough transmission capacity is available to deliver the power. A key input into running the models, optimizing market solutions, and operating the grid in real time, is timely and accurate information about the availability or outage of transmission facilities that comprise the ISO controlled grid and generation resources within the ISO balancing authority area.

ISO Tariff Section 9.3 requires participating transmission owners of facilities that comprise the ISO grid, and participating generators, to submit outage requests to the ISO for approval, and gives authority to ISO Outage Coordination to approve or deny such requests. ISO Outage Coordination evaluates outage requests for reliability impacts, changes to path ratings, necessary changes to network models, and many other considerations that may affect the timing of an outage. ISO Outage Coordination

⁴ *Id.* at p. 31.

⁵ *Draft 2013 Filing Guide for System and Local Resource Adequacy (RA) Compliance Filings*, issued by the CPUC Energy Division (August 2, 2012).

and Engineering perform studies, run models, and forecast the market impact of the requested outages in conjunction with the then-existing schedule of planned outages for the specified period before it approves or denies the outage request. The types of scheduled maintenance coordinated by ISO Outage Coordination include:

- All outages that affect ISO balancing authority area interconnections, which must be coordinated with adjacent balancing authority areas;
- All work on participating transmission owner facilities that form the ISO controlled grid, including associated control or protective equipment;
- All reportable outages or partial curtailments of participating generators with a rated capacity greater than 1MW;
- All reportable outages of reliability must run generating units;
- Energy management system work that disables any portion of ISO grid monitoring, control or protective equipment including communication circuits;
- Energy management system work that affects automatic generation control or remote intelligent gateway equipment or communication circuits; and
- Ancillary Service certification testing and compliance testing.

The ISO handles nearly 80,000 requests for transmission and generation outages every year. Approximately 38 percent of the outage requests that have a model impact are received only 3 to 4 days, or less, before the outage is scheduled to commence. The volume of short-noticed maintenance outages with a market impact leaves little time for outage analysis and reduces the efficiency and effectiveness of outage coordination. The closer to real-time that outage requests must be processed, fewer and fewer options may exist to respond to unanticipated outages, and prices for energy are higher and opportunities to utilize less costly and more efficient resources are limited by availability.

Further, the ISO currently accepts or rejects each planned maintenance outage request based on whether the outage presents a reliability risk when all possible generation that may avert that risk are also considered. The ISO does not have express tariff authority to reject planned outages or extensions to those outages by generators on the basis that they would reduce the level of resource adequacy generation below appropriate levels. Through 2012, the risks in this regard have been mitigated (but not eliminated) by the CPUC replacement rule which requires the jurisdictional load serving entities to provide replacement capacity for planned maintenance outages at the RA resources the list in their RA plans, subject to the criteria set forth in the rule.

However, absent the CPUC's replacement rule to address planned outages, a

change to the ISO's outage management process is necessary to maintain the appropriate level of available RA capacity throughout each month. The ISO recognizes that managing outages to preserve a RA reliability requirement should not detrimentally impact the opportunity for operators to take outages needed maintenance, which could also adversely impact longer term reliability, nor preclude opportunities to economically replace the RA resource to allow maintenance and preserve reliability

The ISO submits that its proposed replacement requirement and change in the outage management process to consider resource adequacy requirements are fundamental to maintaining the appropriate level of capacity needed for grid reliability, while still providing opportunities for needed maintenance. In addition, the ISO's proposal in this proceeding is designed to provide incentives for RA resources to schedule maintenance outages further in advance of the start date of the outage to avoid the possibility of a replacement requirement. This will improve the efficiency and effectiveness of the ISO's outage management.

II. STAKEHOLDER PROCESS

In 2010, in parallel with the CPUC proceedings reviewing whether to eliminate the replacement rule, the ISO began a stakeholder initiative to consider implementation by the ISO of an alternative replacement requirement. Numerous proposals were examined that would have imposed a replacement rule on generators, rather than on the load serving entities as the CPUC's replacement rule does. The initiative was suspended because there was not broad support among the stakeholders for any of the proposed options. Generators indicated that they, unlike the load serving entities which were the focus of the CPUC replacement rule, did not have portfolios of generation from which they could find replacement capacity and that the costs of replacement would be prohibitive. The generators also argued that requiring automatic replacement of RA capacity on a planned outage would result in over-procurement of RA capacity. They based this argument on the annual procurement cycle and belief that in non-peak months there will be sufficient RA capacity available so that some of that capacity could be on planned outages while the remaining available capacity meets the RA reliability requirement.

Following the CPUC's decision to eliminate its replacement rule, the ISO in 2012 re-activated the replacement requirement stakeholder initiative. The stakeholder initiative involved conference calls with stakeholders, issuance of several whitepapers discussing the ISO's proposal, and multiple opportunities for stakeholders to provide input into the development of the proposal.⁶

The ISO re-activated the stakeholder process on March 6, 2012 by publishing a Straw Proposal that described the need for a replacement mechanism for RA capacity

⁶ The record for the initiative is posted on the ISO's website at: <http://www.caiso.com/informed/Pages/StakeholderProcesses/ReplacementRequirementScheduledGenerationOutages.aspx>. This record includes the ISO's whitepapers, all comments submitted by stakeholders during the stakeholder process, all stakeholder meeting presentations, and the draft tariff language.

that is on a planned outage and outlined the ISO's initial proposal to establish a replacement requirement. The proposal was structured to impose a replacement obligation on the load serving entities and the generators, depending on the timing of when the request for a maintenance outage is made, and to provide flexibility to accommodate planned outages at RA resources without reducing RA capacity below the RA reliability requirements.

The ISO held a stakeholder meeting to discuss the Straw Proposal on March 6, 2012. Stakeholders were invited to submit written comments on the proposal to the ISO by March 26, 2012. Comments were received from 18 stakeholders.⁷ On April 17, 2012, the ISO issued a Revised Straw Proposal that, based on stakeholder input, suggested changes to the initial proposal in three areas -- the allocation of the RA maintenance outage backstop procurement costs, the allowance for short planned maintenance outages, and the treatment of planned outages for local resources.

The first change related to a provision in the initial Straw Proposal that would allow the ISO to engage in backstop procurement and allocate the costs to the generator if it took a forced outage, after the ISO had rejected its request for a planned outage, and failed to provide substitute capacity. Several stakeholders noted that the non-availability changes under the SCP provisions in Section 40.9 already apply to forced outages at RA resources and provide sufficient incentives for RA resources to provide substitute capacity for forced outages. Comments also noted that, under the ISO's existing capacity procurement mechanism ("CPM") rules, the cost of procuring backstop capacity to replace outages that may only last a few days could be excessive if the acquired capacity receives a 30-day or 60-day CPM designation.

In response to stakeholder comments, the ISO removed this provision from the proposal. The ISO agreed that the SCP non-availability charges provide sufficient incentive for RA resources to provide substitute capacity during forced outages. Further, the ISO determined that if the ISO must procure backstop capacity to supplement the amount of RA capacity that is operationally available to the ISO and not on forced outages in order to ensure the reliability of the grid, then these costs are system level costs that are not appropriately allocated to a specific RA resource, and should be allocated to load.

The second change responded to stakeholder comments, at the meeting and in

⁷ Comments were submitted by the Alliance for Retail Energy Markets (AREM); the Cogeneration Association of California and The Energy Producers and Users Coalition ("CAC-EPUC"); Calpine Corporation ("Calpine"); the California Department of Water Resources State Water Project ("CDWR-SWP"); the California Municipal Utilities Association ("CMUA"); the California Public Utilities Commission ("CPUC"); GenOn Energy, Inc. ("GenOn"); Independent Energy Producers Association ("IEP"); J.P. Morgan Ventures Energy Corporation and BE CA, LLC (collectively, "J.P. Morgan"); Northern California Power Agency ("NCPA"); NRG Energy, Inc. ("NRG"); Pacific Gas and Electric Company ("PG&E"); San Diego Gas and Electric Company ("SDG&E"); Southern California Edison Company ("SCE"); Sempra US Gas and Power ("Sempra"); the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, CA (collectively "Six Cities"); Wellhead Electric Co., Inc. ("Wellhead"); and the Western Power Trading Forum ("WPTF").

written comments, that described the need for generators to take short maintenance outages with some frequency. The stakeholders suggested that it would be better to have these short maintenance outages occur at off-peak times, even if they would drop the level of RA capacity below 115 percent of the forecast monthly peak demand. They also suggested that being allowed to take these short maintenance outages would help the generators avoid forced outages during peak periods.

To address this concern, the ISO's Revised Straw Proposal changed the original proposal to allow RA resources to take short-term planned outages that would only occur during off-peak periods and to take short-notice opportunity outages, both without replacement capacity. For the off-peak outages, the ISO would not require that the system resource adequacy level remain above 115 percent of the forecast monthly peak demand. The ISO will determine if there are any factors, such as other generating units or transmission facilities on outage, that might create a reliability issue, and in the absence of any reliability concerns would approve the outage. For long start units, the outage would have to be ended with sufficient time for the unit to be available for the next peak period. If the resource extends an approved off-peak opportunity outage, the extended time would be treated as a forced outage. For the short-notice opportunity outages, generators that need to take an outage for maintenance reasons must provide adequate notice in advance of the start date for the outage for the ISO to analyze the request and determine whether the outage can be accommodated. As with all outages today, either of these types of planned outages could be cancelled by the ISO if conditions change and the units are needed for reliability reasons.

The third change removed the replacement requirement for local capacity RA resources. The ISO agreed with stakeholder comments that the replacement requirement for scheduled generation outages must include an accommodation for planned maintenance outages for local capacity RA resources. The revised proposal for local capacity areas maintains the ISO's current process for approving maintenance outages for resources in these areas. The ISO will continue to work with generators to find times when they can take maintenance outages without impacting the reliability of the local area. As is currently the case, the ISO will deal with these requests on a first come first served basis.

In addition to the comments addressed through these three changes, the Revised Straw Proposal addressed other issues raised by stakeholders, and either clarified or explained how the Straw Proposal either already addressed the issue, or why the ISO was not revising its initial proposal. These comments are discussed with the final proposal in the next section of this transmittal letter.

On April 24, 2012, the ISO conducted a stakeholder conference call to discuss the Revised Straw Proposal. The ISO accepted written comments on the Revised Straw Proposal through May 10, 2012. The ISO received 16 comments.⁸ The ISO addressed the concerns raised in these comments in the Draft Final Proposal published

⁸ Comments were submitted by AReM, Calpine, CDWR-SWP, CPUC, GenOn, IEP, J.P. Morgan, NCPA, NRG, PG&E, SDG&E, SCE, Sempra, Six Cities, Wellhead, and WPTF.

on May 17, 2012.

Based on the comments stakeholders submitted about the Revised Straw Proposal, the ISO changed elements of its replacement requirement provisions in the final draft proposal. These changes include the date for submitting RA plans and supply plans to the ISO, the option for load serving entities to provide specified capacity to replace RA capacity in their monthly plans that is scheduled for a maintenance outage during the month, and the length of the replacement requirement period. These changes and the stakeholder comments are discussed in greater detail with the final proposal below.

Stakeholders had the opportunity to provide input on the Draft Final Proposal during a stakeholder conference call on May 24, 2012 and through submission of written comments. The ISO received 16 comments, which are discussed below.⁹ Because many of the comments asked questions or requested clarification of the ISO's Draft Final Proposal, the ISO conducted a second stakeholder conference call on June 14, 2012 to discuss the Draft Final Proposal.

The proposal was presented to the ISO Governing Board on July 12, 2012 and the Board authorized this filing.¹⁰

The ISO posted draft tariff language for this initiative on July 30, 2012. Eight stakeholders provided comments on the draft language.¹¹ These comments, and revisions made by the ISO to the draft tariff language based on the comments, were discussed during a stakeholder conference call on August 15, 2012. The ISO posted revised draft tariff language on August 30, 2012, and received five written comments on the revisions made.¹² The ISO conducted a second conference call with stakeholders on September 10, 2012 to discuss their comments and the final proposed tariff language. To the extent that the stakeholder comments were not accepted as revisions to the draft tariff language during this process, the comments are discussed with the final proposal below.

III. REPLACEMENT REQUIREMENT PROPOSAL

A. SUMMARY OF PROPOSAL

⁹ Comments were submitted by CDWR-SWP, PG&E, SDG&E, SCE, and Six Cities.

¹⁰ The Memorandum presented to the ISO Board of Governors regarding the Decision on Replacement Requirement for Scheduled Generation Outages is provided as Attachment D to this filing.

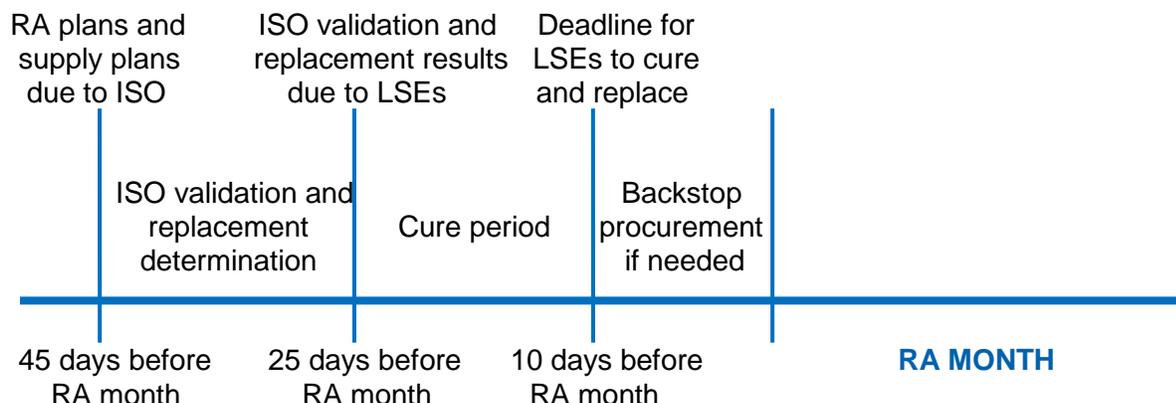
¹¹ Comments were submitted by AReM, CAC-EPUC, Calpine, CPUC, NRG, PG&E, SDG&E, and SCE.

¹² Comments were submitted by AReM, CAC-EPUC, Calpine, CDWR-SWP, CPUC, GenOn, La Paloma Generating Company ("La Paloma"), NCPA, NRG, PG&E, SDG&E, SCE, City of Santa Clara ("SVP"), Six Cities, Wellhead, and WPTF.

The ISO’s proposal creates a just and reasonable, resource adequacy and outage management replacement procedure that ensures there will be sufficient, available capacity to reliably operate the grid and meet the load obligations of the load serving entities while minimizing ISO procurement of capacity through a backstop mechanism. The proposed tariff modifications establish a replacement requirement for RA capacity that is scheduled for a maintenance outage and which will not be operationally available to the ISO for all or a portion of the month that the resource is on outage, but which has been listed as RA capacity for the month. The replacement requirement apportions responsibility for replacement between the load serving entities and the suppliers, depending on the timing of the outage request.

The ISO’s expectation is that the monthly RA plans should include resources that are expected to be operationally available to the ISO at the time the load serving entity makes its filing. The scheduling coordinators for the load serving entities are subject to the replacement requirement, to the extent the ISO determines, based on the application of specified criteria, that certain RA capacity listed in their monthly RA plans which is scheduled for an approved maintenance outage during the month and which will not be operationally available to the ISO must be replaced with available capacity.

TIMELINE OF SUBMISSION, VALIDATION AND BACKSTOP PROCESS

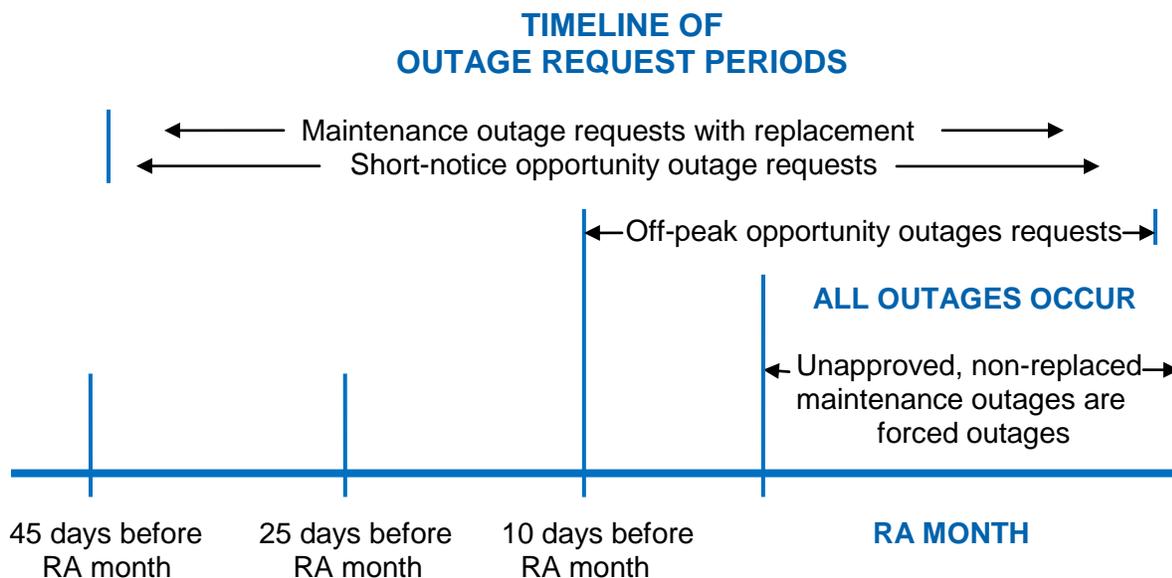


Under the proposed tariff modifications, the scheduling coordinators for the load serving entities are required to replace capacity included in their monthly RA plans that is scheduled for an approved maintenance outage, to the extent that the ISO determines replacement is needed in order for system total available RA capacity¹³ to

¹³ The proposed definition of system total available RA capacity is the system total RA capacity provided in the RA plans, including the total MW of specified RA replacement capacity accepted by the ISO, less the total MW of unreplaced capacity in the RA plans that is scheduled to take an approved maintenance outage during the month.

be at least equal to the RA reliability margin¹⁴ for each day of the month. If the system total available RA capacity is short on a day, the scheduling coordinator for each load serving entity that did not include available RA capacity in its plan equal to or greater than its applicable forecasted monthly demand and reserve margin each day will be required to provide replacement capacity for unavailable RA capacity included in its plan. If the scheduling coordinator for the load serving entity does not provide sufficient operationally available replacement RA capacity, and the resource does not cancel or reschedule its approved maintenance outage, the ISO will have the ability to procure RA maintenance outage backstop capacity.

The ISO expects that resources designated to provide resource adequacy should be operationally available to ISO during the RA month. The operators of RA resources are subject to the replacement requirement after the monthly supply plans are submitted. The replacement requirement increases the likelihood that a request to schedule a new maintenance outage, or reschedule an approved maintenance outage, during the month the resources are listed to provide resource adequacy service, can be accommodated if they provide equivalent replacement capacity with their outage request. Under the proposed tariff modifications, after submitting their monthly supply plans to the ISO, the operators of RA resources may schedule a maintenance outage, or reschedule an approved maintenance outage, during the resource adequacy month, if they include an equivalent amount of replacement capacity with their request. Without replacement capacity, the outage may be performed during off-peak hours or accommodated upon short notice if system conditions and the overall outage schedule provide an opportunity for the ISO to accommodate the outage without a detrimental effect on the efficient use and reliable operation of the grid.



¹⁴ The proposed definition of the RA reliability margin is the ISO system forecast monthly peak demand, plus a reserve margin of 15 percent of the forecast monthly peak demand, based on the forecast prepared by the California Energy Commission.

The proposed tariff modifications also establish a new backstop mechanism under which the ISO may procure capacity to replace RA capacity that will not be operationally available to the ISO due to a maintenance outage and that was not replaced under the replacement requirement for load serving entities. The backstop provisions authorize the ISO to procure RA maintenance outage backstop capacity for a minimum commitment of one day and a maximum commitment of 31 days, as needed, when the ISO determines that replacement is necessary but the scheduling coordinator for a load serving entity does not provide the required outage replacement capacity and the operator for the resource does not reschedule or cancel the approved maintenance outage.

The ISO submits that this proposal will provide for market efficiency and results in a fair allocation of responsibility for maintenance outages to both load serving entities and suppliers, while reinforcing the fundamental purpose of the resource adequacy program to ensure that the ISO has sufficient generation capacity to reliably operate the grid. The proposal augments the ISO's resource adequacy provisions and outage management practices by establishing a replacement requirement that appropriately balances the interests of the load serving entities and the suppliers. The proposal is designed to meet the load obligations of the load serving entities and to allow suppliers flexibility in scheduling their maintenance outages, while minimizing the need for the ISO to procure RA maintenance outage backstop capacity. The proposal establishes criteria for replacement that will require unavailable RA capacity be replaced by load serving entities for specific days when system total available RA capacity is less than the RA reliability margin, which will avoid over-procurement of replacement capacity for an entire month, or even for the duration of the scheduled maintenance outage, if the criteria show that system reliability is at risk for only one day. The ISO will examine each maintenance outage to determine its impact on the level of RA resources, and will only require replacement of the RA capacity by load serving entities when that maintenance outage reduces ISO system total available RA capacity below the RA reliability margin.

Further, the ISO's proposal appropriately apportions responsibility for outage replacement between the load serving entity and the supplier, depending on the timing of the outage request. Load serving entities have the replacement responsibility for maintenance outages scheduled at resources included in their RA Plans, while suppliers have the replacement responsibility for maintenance outages requested after the RA Plans and Supply Plans have been submitted, to the extent that replacement is required by the ISO. The ISO believes that this dual responsibility will encourage the load serving entities and the generators to negotiate, during the procurement process, the least expensive method for providing replacement capacity.

The proposal will also improve outage coordination management for the system overall and RA resources in particular. With the replacement requirement in effect for those days when system total available RA capacity is less than the RA reliability

margin, there should be more certainty to outage management and scheduling than under the prior CPUC replacement rule where an RA resource could be unavailable from 25 percent to 50 percent of the month, depending on the season, and there was no limit on the extent to which the outages could overlap. In addition, under revised Section 9.3.1.3, ISO Outage Coordination will have express authority to deny, reschedule or cancel an approved maintenance outage for facilities that comprise the ISO 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 RA capacity or the efficient use and reliable operation of the grid or connected facilities. This authority, in conjunction with the replacement requirement, should increase the efficiency and effectiveness of the ISO's outage management.

Some stakeholder comments either questioned the need for the ISO to do anything in response to the CPUC's elimination of the replacement rule, or requested the ISO delay implementation of its requirement for a year.¹⁵ As the ISO explained in the Revised Straw Proposal, neither of those options is viable. The CPUC's replacement rule will expire starting January 1, 2013. After the replacement rule expires, absent the ISO's proposal, a generating unit that takes a maintenance outage for as short as one day or as long as the entire month, would reduce available RA capacity by the length of the outage without any obligation to cure such unavailability. Unless an alternative mechanism is in place, market participants will incur additional costs to the extent that the ISO has to rely on its backstop authority to replace RA capacity that is unavailable due to planned outages. Further, the ISO should not be required to wait until a reduced level of available RA resources actually begins causing reliability problems before taking steps to get out in front of the issue and implement the needed changes to ensure that the sufficient RA capacity is available to maintain grid reliability. It is fundamental to reliable grid operation that sufficient resources are available. Resources that are out of service due to planned maintenance outages are not available to support grid reliability.

Other stakeholder comments suggested that the ISO simply adopt and continue the existing CPUC replacement rule.¹⁶ The ISO declined to take this approach. The CPUC replacement rule has several flaws, which the ISO's proposed replacement requirement is designed to correct. The major flaw in the replacement rule relates to the amount of time that a resource can be on outage and count as RA capacity without being replaced. The rule is premised on the assumption that during about 25 percent of the time in summer months and about 50 percent of the time in winter months, RA resources can take a maintenance outage without impacting grid reliability. Under this assumption, the CPUC replacement rule allows RA resources to be unavailable up to one week in a summer month and up to two weeks in a winter month without requiring any replacement capacity for the outage. Further, the rule contains no provision that limits the amount of time or capacity that may subject to overlapping outages during the month. Another flaw in the CPUC replacement rule is that creates incorrect incentives

¹⁵ GenOn Comments on Draft Final Proposal (June 4, 2012).

¹⁶ Six Cities Comments on Draft Final Proposal (June 1, 2012).

for RA resources in scheduling and/or replacing resources on planned outages. For example, under the CPUC replacement rule, an outage could be scheduled to begin in one month and the end in the following month, and thereby be short enough in each month to avoid a replacement obligation. Another example is that a planned outage scheduled several months in advance would require the load serving entity to replace the RA capacity under the CPUC's RA replacement rule; however, if the same outage is scheduled five days before the month in which it occurs, it would not trigger any replacement. This could allow a unit to be on a maintenance outage for the entire month and count for RA capacity without a replacement obligation, even though the unit is operationally unavailable. In other words, the outage allowances in the CPUC replacement rule prevent the resource adequacy program from fulfilling its objective of ensuring that the ISO has sufficient RA resources to meet 115 percent of the system peak for the month. The ISO's proposal addresses these deficiencies in the existing CPUC replacement rule.

In comments on the Draft Final Proposal, Six Cities favored the CPUC replacement rule because it offers more flexibility for load serving entities to have generator outages less than ten days in a month, and claimed that the ISO's proposed replacement requirements are too stringent, especially for non-summer months.¹⁷ The ISO disagrees with Six Cities' characterization of the CPUC rule. Rather than providing flexibility, the allowance in the rule for extended outages by RA resources during the month they are providing RA service -- without requiring replacement capacity -- undermines the ability of the resource adequacy program to deliver the required RA capacity, and could result in there being insufficient RA capacity that is actually available in a given month to ensure reliability. The ISO's proposal strikes a reasonable balance in curing this flaw in the rule without requiring that all unavailable capacity in RA plans be replaced.

The CPUC staff submitted comments on the draft tariff language requesting that proposed Section 9.3.1.3.1 be revised because it interferes with the CPUC's jurisdictional authority over the resource adequacy program.¹⁸ In response to these comments, the ISO revised the draft tariff language to make it clear that the proposed replacement requirement is structured to ensure that the RA capacity provided under the CPUC's resource adequacy program is operationally available to the ISO during the resource adequacy month to ensure the reliable operation of the grid. The replacement requirement is an outage management tool and reliability measure, not a determination of whether the load serving entity is in compliance with its resource adequacy obligation, which is within the authority of the CPUC for its jurisdictional load serving entities. The ISO believes that these tariff revisions have addressed the jurisdictional concerns raised by the CPUC staff.

Many stakeholders, both load serving entities and generators, requested that the ISO consider grandfathering their existing contracts so as to exempt the capacity under

¹⁷ Six Cities Comments on Draft Final Proposal (June 1, 2012).

¹⁸ CPUC Comments on Draft Tariff Language (August 9, 2012).

such contracts from the obligations proposed by the ISO in this tariff amendment. These stakeholders argued that their power purchase agreements did not contemplate changes in the replacement rule and outage management and that the changes in the replacement provisions will cause shifts in costs or new costs which were not contemplated when the contracts were signed. The ISO does not believe that it is appropriate to grant such an exemption.

While the ISO understands these concerns, the ISO does not believe that exempting the capacity of some market participants under existing contracts benefits the overall electric marketplace in California or market participants in general. The ISO's responsibility is to ensure that the market design is efficient and just and reasonable. Market participants should not automatically be permitted to shield themselves from the impacts/requirements of ISO market design and other tariff changes by simply signing a bilateral contract outside of the context of the ISO market and then claiming that they should not be required to adhere to the ISO's market rules when they are participating in the ISO's markets or taking advantage of other marketplace opportunities (such as participation in the RA program). Also, it is unreasonable for market participants to assume that the ISO Tariff, or the CPUC's RA rules, will remain forever static and never change. The ISO has the ability to seek to change its tariff at any time under Section 205 of the Federal Power Act and, given the ever changing conditions on the grid, in the markets, and in state policies, changes to the tariff are likely. Thus, market participants are expected to (i) realize that market changes and other tariff changes are to be expected, and may be necessary, particularly with the significant changes in grid topography that will be occurring in the next several years, and (ii) ensure that their contracts contain provisions that address potential market design changes, as opposed to assuming a static ISO market paradigm that will never change.

Moreover, market participants have known that changes to the replacement requirements were coming. The CPUC decision eliminating the replacement rule was issued over a year ago, and the discussions on this issue have been ongoing for several years. Market participants have had substantial notice that the existing replacement rules were going to change.

In any event, the scope of the changes the ISO is proposing in this filing are not as broad or draconian as some would suggest. A replacement requirement is not a brand new concept. As indicated above, the CPUC has had a replacement rule in effect for many years, and contracts should have taken that provision into account. Stated differently, the ISO is not creating a whole new obligation where none existed before. The ISO is proposing to implement a revised replacement rule that will remedy the aforementioned deficiencies in the current CPUC rule and ensure that there is sufficient available RA capacity to enable it to operate the grid reliably and not have to rely on CPM backstop capacity.

With respect to supplier concerns, the ISO stresses that it is not imposing the costs of any backstop procurement on supply resources. The only financial consequences that suppliers face are potential SCP unavailability charges if they list

their capacity as RA for the month, and they take a forced outage. However, suppliers of RA capacity are already subject to such charges when they are not available due to forced outages. In addition, the ISO already has the ability to deny maintenance outage requests under specified circumstances. The only thing the ISO is changing is the criteria pursuant to which it will evaluate outage requests.

In addition, allowing the existing contracts of some entities to be exempted from the proposed replacement requirement would not be fair to the other market participants who would be expected to pick up the additional costs the exemption imposes on the system. Entities which did not have exempted contracts because they were aware of the impending changes and adjusted their contracting to accommodate the needed market design changes would be required to pay costs incurred for those entities which chose not to respond to the impending changes.

In comments on the draft revised tariff language, SCE for the first time suggested that the ISO exempt cost allocation mechanism (“CAM”) resources from the outage replacement requirement. SCE claims that no mechanism currently exists to allow for allocation of the costs of replacement capacity among the individual benefitting load serving entities in the event that a CAM resource on a scheduled outage requires replacement capacity. As a result, SCE argued that all of the costs attributed to the replacement capacity would have to be borne by the investor-owned utility of the CAM resource, resulting in an unfair burden on the investor-owned utility and a cross-subsidy to the other benefitting load serving entities that avoid having to pay their fair share of the capacity replacement costs. SCE urged the ISO to exempt CAM resources from the replacement requirement until the cost-allocation issue surrounding replacement capacity can be addressed at the CPUC in the next resource adequacy proceeding. For the reasons discussed above, the ISO declined to adopt this request for an exemption.

CAC and EPUC requested that the ISO exempt generators with unit contingent sales from the replacement requirement. CAC and EPUC maintained that because the QF pro forma contracts are unit contingent, the QFs are only required to provide products which that specific unit can produce and should not be required to replace capacity when that unit is on a maintenance outage. CAC and EPUC claimed that the proposed replacement provisions would require QFs to provide more or firmer RA capacity than they are contractual obligated to deliver and would impose a cost responsibility on the QFs that should be limited to utility generation. CAC and EPUC viewed the ISO’s proposal as imposing new costs on combined heat and power and other generators, which do not have existing replacement obligations and cannot recover any increased costs for replacement under their contracts. They suggested that the replacement requirement be imposed only on the load serving entities.¹⁹

During the stakeholder process, the ISO initially considered whether generators with unit contingent sales should be excluded from the replacement requirement;

¹⁹ CAC and EPUC Comments on Straw Proposal (March 26, 2012), Comments on Draft Final Proposal (June 1, 2012), and Comments on Revised Tariff Language (September 10, 2012).

however, as the proposal evolved and the ISO created more opportunities for RA resources to take a maintenance outage without replacement capacity, the ISO determined that the exemption was not warranted. The ISO's proposal, and provisions of the QF pro forma contract, provide outage replacement off-ramps to RA resources, which the ISO believes in the composite substantially reduce the risk that the QFs will bear any financial consequences for replacement capacity.

The first off-ramp is provided in the pro forma contract, which requires the QFs to schedule maintenance outages at least six months in advance of the outage start date. If a QF complies with that provision, then its major planned maintenance outages will be scheduled well before the RA plans are due for the resource adequacy month and will be the responsibility of the load serving entity to replace in the event the ISO determines that replacement is needed. Second, after the RA plans are submitted, if any resource, including a QF, wants to schedule a maintenance outage during the resource adequacy month, it can do so without providing replacement capacity by requesting an off-peak opportunity RA maintenance outage or a short-notice opportunity RA maintenance outage. Third, if the QF opts to take a forced outage instead of an RA maintenance outage, the outage would be subject to applicable SCP non-availability charges, but Section 3.22(a) of the pro forma contract provides that, if the buyer is acting as the scheduling coordinator for the resource, the SCP charges are the responsibility of the buyer, not the QF. In those cases where the seller/resource acts as the scheduling coordinator for the resource, the resource is obviously well versed in the operation of the ISO markets and should be able to comply with the replacement rule.

In the ISO's view, there is low risk of financial impact to the QFs that avail themselves of these various outage management tools, whereas, as discussed above, there are strong reasons not to exempt existing contracts from the replacement requirement that will now be administered by the ISO rather than the CPUC. The CPUC has had a replacement rule in effect for many years, and contracts should have taken that provision into account. The ISO accordingly does not believe that the exemption requested by the QFs is warranted.

The ISO submits that its proposal creates a just and reasonable, resource adequacy and outage management replacement procedure that ensures sufficient capacity will be operationally available to reliably operate the grid and meet the load obligations of the load serving entities while minimizing ISO procurement of capacity through the backstop mechanism. The proposed replacement requirement and RA maintenance outage backstop capacity procurement will enhance the ISO's outage management and ability to maintain reliable system operations.

B. COORDINATING MAINTENANCE OUTAGES OF RA RESOURCES

1. Authority To Consider RA Status

Proposed Tariff Section 9.3.1.3 gives express authority to ISO Outage Coordination to take into consideration the status of a generating unit as an RA resource in performing its outage coordination management under Section 9. This

authority allows ISO Outage Coordination to deny, reschedule or cancel an approved maintenance outage for facilities that comprise the ISO 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 RA capacity or the efficient use and reliable operation of the ISO controlled grid or facilities of a connected entity.

Under existing Sections 9.3.6.4.1, 9.3.6.8, and 9.3.6.9, ISO Outage Coordination is required to evaluate whether a requested maintenance outage, or change to an approved maintenance outage, is likely to have a detrimental effect on the efficient use and reliable operation of the grid or facilities of a connected entity and may authorize the requested outage if it is unlikely to have a detrimental effect or deny or cancel the outage if it is likely to have a detrimental effect on the efficient use and reliable operation of the grid. These sections mention the reliable operation of the grid as part of the standard that ISO Outage Coordination must use to determine whether an outage should be approved, but they do not expressly state that the RA status of a resource may be considered as a factor in that reliability evaluation. The proposed language in Section 9.3.1.3 remedies that gap. The language expressly provides that the RA status of generating units may be taken into account during the outage coordination process. The ISO believes that this tariff modification is reasonable and will improve the effectiveness of outage coordination. The ISO notes that no stakeholder comments were submitted in opposition to the change during the stakeholder initiative.

2. Replacement Requirement For LSEs

a. LSE RA Plans

Under proposed Section 9.3.1.3.1.1, each scheduling coordinator for a load serving entity is required to submit to the ISO a monthly RA Plan that meets the requirements set forth in Sections 40.2.2.4 or 40.2.3.4, as applicable. The proposed language indicates that RA capacity included in the monthly RA plan that, as of the due date for the plan, is scheduled for an approved maintenance outage during the period of RA designation may be subject to replacement. To the extent that a resource included in a monthly RA plan as RA capacity is scheduled for an approved maintenance outage for all or portion of its capacity during the resource adequacy month, the proposed language indicates that the capacity scheduled for outage is not operationally available to the ISO and may be required to be replaced with capacity from another resource 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.

Under proposed Section 9.3.1.3.1.1, each scheduling coordinator for a load serving entity is required to submit to the ISO a monthly RA Plan that meets the requirements set forth in Sections 40.2.2.4 or 40.2.3.4, as applicable. The proposed language indicates that RA capacity included in the monthly RA plan that, as of the due date for the plan, is scheduled for an approved maintenance outage during the period of designation may be subject to replacement.

As discussed below, the replacement requirement also applies to generators. Specifically, under the proposed tariff modifications, after submitting their monthly supply plans to the ISO, the operators of RA resources may schedule a maintenance outage, or reschedule an approved maintenance outage, during the resource adequacy month, if they include an equivalent amount of replacement capacity with their request; otherwise the outage may be accommodated by ISO Outage Coordination as an off-peak opportunity RA maintenance outage²⁰ or short-notice opportunity RA maintenance outage.²¹ To the extent generator operators take an outage that is not approved as by the ISO, such outage is a forced outage, as it is under the tariff today.

In the event that the ISO determines that RA capacity included in a load serving entity's RA plan must be replaced, under the applicable criteria, either the load serving entity or the operator of the RA resource on outage may cure the deficiency.

These proposed tariff modifications augment the ISO's resource adequacy provisions and outage management practices by establishing a replacement requirement that appropriately balances the interests of the load serving entities and the suppliers. The proposal is designed to meet the load obligations of the load serving entities and to allow suppliers flexibility in scheduling their maintenance outages, while minimizing the need for the ISO to procure RA maintenance outage backstop capacity.

Comments from both load serving entities and generators during the stakeholder initiative indicated that they were not in a position to provide replacement capacity and that any obligation for replacement should rest on the other party to the resource adequacy contracts. In the initial Straw Proposal, the ISO explained its position that the party responsible for providing the replacement capacity in the first instance was a contract issue that should be decided between the parties to the contracts. In the Revised Straw Proposal, the ISO indicated that the comments have not changed the ISO position, and indeed seem to support the position.

The Straw Proposal reaffirmed the requirement in the tariff that RA resources are expected to be available during the month that they are listed to provide RA capacity. The determination of which party is in a better position to provide replacement capacity depends on the parties involved and the contract terms they negotiated. AReM's comments agreed with this concept even while arguing that the responsibility for replacement capacity should reside only with generation: "While these statements may be true for the investor-owned utilities, which own or control vast quantities of RA resources, it is most assuredly not true for electric service providers (ESPs)."²² IEP

²⁰ The proposed definition of an off-peak opportunity RA maintenance outage is a maintenance outage for an RA resource that is approved by ISO Outage Coordination to be initiated and completed during off-peak hours (as specified in the Business Practice Manual) without RA replacement capacity.

²¹ The proposed definition of a short-notice opportunity RA maintenance outage is a maintenance outage, or change to an approved maintenance outage, for an RA resource that does not qualify as an RA maintenance outage with replacement or off-peak RA opportunity outage, but that ISO Outage Coordination can accommodate on short notice without RA replacement capacity.

²² AReM Comments on Straw Proposal, p. 2 (March 23, 2012).

suggested, on the other hand, that: "As a practical matter, many generators are not well positioned to procure replacement capacity."²³ There also appeared to be confusion about outage information and scheduling. AReM believes generators have all the information: "By contrast, the LSE -- unless it owns or controls the resource -- has no knowledge of the condition of the resource nor access to any public information on planned outages for its RA resources."²⁴ However, according to J.P. Morgan, the situation may be reversed: "For example, current RA contracts allow LSE's to approve planned outages. Especially considering the potential penalties/incentives under the ISO proposal, LSE's are unlikely to give up this authority."²⁵ These divergent comments underscore the reasonableness of the proposal in apportioning responsibility for replacement between the load serving entities and the suppliers. This is the best method for providing replacement capacity as well as for providing the appropriate incentive to make available to the ISO the full level of RA capacity reflected in the monthly RA and supply plans, consistent with the commitments reflected in those plans.

During the portion of the stakeholder initiative that considered draft tariff language, the ISO modified proposed Section 9.3.1.3.1.1 to remove the requirement that a load serving entity include in its RA plan only RA capacity that, as of the due date for the plan, is not scheduled to take an approved maintenance outage during the resource adequacy month. The ISO agreed with SDG&E, PG&E, and SCE that the language was overly restrictive since not all maintenance outages at RA resources will require replacement for reliability reasons.²⁶

b. RA Resource Pending Maintenance Outage Requests

Under proposed Section 9.3.1.3.1.2, if an RA resource requested a planned maintenance outage, or change to an approved maintenance outage, more than forty-five days in advance of the resource adequacy month but does not receive approval or denial of the request by ISO Outage Coordination as of the due date for the RA plans and supply plans, ISO Outage Coordination, 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, and if so, whether it must be replaced in the plan with capacity from another resource that is operationally available in the amount and for the duration of the scheduled outage during the month.

This provision is needed to address instances in which the operator of a resource submitted a request for a maintenance outage or for a change to an approved maintenance more than 45 days in advance of the resource adequacy month, but ISO Outage Coordination did not respond to the request and either accept or reject the outage before the RA plans and supply plans were submitted -- the outage request

²³ IEP Comments on Straw Proposal, p. 4 (March 26, 2012).

²⁴ AReM Comments on Straw Proposal, p.1 (March 23, 2012).

²⁵ J.P. Morgan Comments on Straw Proposal, p. 1 (March 23, 2012).

²⁶ SDG&E Comments on Draft Tariff Language, p. 3 (August 7, 2012); PG&E Comments on Draft Tariff Language (August 6, 2012); and SCE Comments on Draft Tariff Language (August 7, 2012).

remained pending. Proposed Section 9.3.1.3.1.2 provides for any pending requests to be considered by ISO Outage Coordination as part of the validation and replacement process.

The ISO believes that considering the request in this manner is a reasonable approach, and preferable to either deeming the request denied or precluding its inclusion in an RA plan. In its comments, SDG&E argued that late-approved outages are not within the control of the load serving entity and should be replaced by the generator.²⁷ The ISO believes that whether a pending outage request should be granted and whether the capacity on outage needs to be replaced should be considered as part of system analysis of other outage requested in the same timeframe during the validation of the RA plans.

For the resource adequacy month of January 2013, proposed Section 9.3.1.3.1.2 provides that if a resource adequacy resource requested a maintenance outage, or change to an approved maintenance outage, more than forty-one days in advance of the resource adequacy month but does not receive approval or denial of the request as of the due date for the monthly plans, ISO Outage Coordination will determine whether the outage should be approved as part of the validation under Sections 9.3.1.3.2.3 and 40.7(b), and, if so, whether it must be replaced in the RA plan with capacity from another resource that is operationally available in the amount and for the duration of the scheduled outage during the month. Allowing requests to schedule a maintenance outage or change an approved maintenance outage to be considered for the resource adequacy month of January 2013 if they were filed more than forty-one days in advance of the month is necessary to align the period during which outage requests may be pending with the date that the monthly plans will be submitted for that month.

c. Optional Lists of Specified and Non-Specified RA Replacement Capacity

The ISO's proposal recognizes that a load serving entity, by choice or due to lack of information, may include in its RA plan capacity from an RA resource that is scheduled to take an approved maintenance outage during the month. The proposal includes two options for the load serving entity to cover that capacity. The scheduling coordinator for the load serving entity may submit with its RA plan (i) an optional list of specified RA replacement capacity²⁸ for the ISO's use to automatically replace specific RA capacity in that load serving entity's plan for a specified period of time or (ii) an optional list of non-specified RA replacement capacity,²⁹ in priority order, which the ISO

²⁷ SDG&E Comments on Draft Tariff Language, p. 3 (August 7, 2012).

²⁸ The proposed definition of specified RA replacement capacity is RA replacement capacity specified by the load serving entity to replace specific RA capacity included in its monthly RA plan, for all or a portion of the period that the RA capacity will not be operationally available to the ISO during the month due to an approved maintenance outage.

²⁹ The proposed definition of non-specified RA replacement capacity is capacity the load serving entity procured that is capable of providing RA capacity, but not designated as RA capacity in the load serving entity's monthly RA plan for the month.

may select and use to replace unavailable capacity included in that load serving entity's RA plan in instances where the ISO determines that replacement is required under proposed Section 9.3.1.3.2.3.

More specifically, under proposed Section 9.3.1.3.1.3, a scheduling coordinator for a load serving entity may include with its monthly RA plan a list of specified RA replacement capacity for the ISO's use to replace specific RA capacity the load serving entity identifies that is in its plan and that is scheduled for an approved maintenance outage during the month, as provided in proposed Section 9.3.1.3.2.2 and revised Section 40.2.2.4. If the scheduling coordinator for a load serving entity opts to include a list of specified RA replacement capacity with its plan, the ISO, in its discretion, will use the specified capacity as RA replacement capacity³⁰ to automatically replace RA capacity included in that load serving entity's RA plan in the MW amount and for the days specified by the load serving entity that the RA resource is scheduled for an approved maintenance outage during the resource adequacy month. The list of specified RA replacement capacity included with a monthly RA plan must identify the resource being replaced, 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 specified in the Business Practice Manual, and be submitted in the format required by the Business Practice Manual.

Under proposed Section 9.3.1.3.1.4, a scheduling coordinator for a load serving entity may include with a monthly RA plan a list of non-specified RA capacity for the ISO's use as RA replacement capacity to replace capacity included in that load serving entity's monthly RA plan that is scheduled for 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 the load serving entity opts to include a list of non-specified RA capacity, the ISO, in its discretion, will select capacity from the list and use the selected capacity to automatically replace RA capacity included in that load serving entity's RA plan in the amount and for the days on which the ISO's validation of the plan determines that the capacity scheduled for an approved maintenance outage during the resource adequacy month must be replaced. The list of non-specified RA capacity included with a monthly RA plan must (i) rank each resource that has available non-specified RA capacity in the order of use preferred by the load serving entity, (ii) 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, (iii) indicate the willingness of the load serving entity to offer each resource that has available non-specified RA capacity for procurement as RA maintenance outage backstop capacity pursuant to Section 43.10, and (iv) be submitted in the format required by the Business Practice Manual.

Neither the listed specified RA replacement capacity nor the listed non-specified

³⁰ The proposed definition of RA replacement capacity is specified RA replacement capacity, non-specified RA replacement capacity, or capacity that is not RA capacity, CPM capacity, or capacity under an RMR contract, that replaces RA capacity that is not operationally available to the ISO due to a maintenance outage.

RA replacement capacity will be subject to the must-offer obligations in Section 40.6 nor the SCP provisions in Section 40.9, unless that capacity is used by the ISO as RA replacement capacity as provided in Section 9.3.1.3.2.2 or Section 9.3.1.3.2.4, as applicable.

The ISO developed the option for load serving entities to provide a list of non-specified³¹ RA replacement capacity based on stakeholder input. Comments by the CPUC indicated that it eliminated the replacement rule with the expectation that replacement capacity would be supplied by the generators.³² However, other comments suggested that, at least sometimes, it would be more cost efficient for the load serving entity to provide replacement capacity, because it may already have cost-effectively procured capacity. The ISO accordingly made a change in the Draft Final Proposal to offer each load serving entity the option of voluntarily including with its plan a list of non-specified resources that it has procured but did not designate to provide RA capacity in that month. These non-specified resources would be available as replacement capacity for the resources designated to provide RA capacity in that load serving entity's RA plan but which are unavailable due to a planned outage.

The ISO thereafter developed the option for load serving entities to provide a list of specified RA replacement capacity, also based on stakeholder input. In comments on the initial draft tariff language, PG&E and several other stakeholders opposed the replacement requirement provision that contemplated that load serving entities would include in their RA plans only blocks of operationally available RA capacity, with any RA capacity on outage replaced with an alternative block of capacity in the amount and for the duration of outage.³³ The ISO considered the stakeholder comments and decided that replacement of all maintenance outages of RA capacity included in an RA plan could lead to the over-procurement of RA capacity. The ISO also recognized that implementing the capacity blocks approach, even at the daily level, would be extremely challenging to implement, particularly because the initial implementation of the ISO's validation and replacement process will be part manual and part automated. The ISO accordingly modified its proposal to instead maintain the month-long nature of the capacity included in the RA plans and provide the option for load serving entities to include a list of specified RA replacement capacity with their RA plans that could be used as daily replacement.

In combination, the option for load serving entities to provide a list of specified RA replacement capacity and a list of non-specified RA replacement capacity will provide greater flexibility for load serving entities to manage their selection of RA capacity to include in their RA plans and to advise the ISO of additional capacity they have under contract that is available to replace their RA capacity that is operationally unavailable due to a scheduled maintenance outage. In addition, relying on the ISO's

³¹ In the Draft Final Proposal, the optional list of capacity was referred to as "non-designated" capacity. In this transmittal letter and the tariff language, the term has been changed to "non-specified" capacity.

³² CPUC Comments on Straw Proposal (March 27, 2012).

³³ PG&E Comments on Draft Tariff Language (August 6, 2012).

determination of the amount of RA capacity that needs to be replaced each day, rather than full replacement in the RA plans, will reduce the likelihood that replacement could result in over-procurement of RA capacity. Having these potential replacement resources at hand will also allow the ISO to quickly resolve conflicts between the monthly plans and any scheduled maintenance outages of RA capacity. Capacity selected as replacement capacity would be subject to all of the applicable provisions in the ISO Tariff, including the must-offer requirement and SCP provisions, throughout the period during which it provides the replacement capacity.

Further, affording load serving entities the option to provide the non-specified RA resources, should resolve the concerns raised by several stakeholders that they will be unable to comply with the replacement requirement because there is not a marketplace procure replacement capacity. As an additional potential solution to this concern, the ISO changed the Draft Final Proposal to provide an option for load serving entities and resources to list on an electric bulletin board notices of capacity that is needed or available for purchase as replacement capacity.

SDG&E claimed that the option to identify non-specified RA replacement capacity is overly complex and unnecessary. PG&E also recommends that the provision be deleted.³⁴ For the reasons just discussed, the ISO believes that the option to provide a list of non-specified RA replacement capacity will have value for other load serving entities. Since providing a list of non-specified RA replacement capacity is voluntary, SDG&E may avoid the complexity it perceives by electing not to use the option.

3. CAISO Replacement Determination For LSE RA Plans

Under proposed Section 9.3.1.3.2.1, the ISO will review each monthly RA plan pursuant to Section 40.7(b) to validate whether 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. The ISO conducts this review already under its existing validation process. Additionally, the ISO will review each monthly RA plan to identify any RA capacity included in the plan that will not be operationally available to the ISO due to an approved maintenance outage scheduled to occur during the relevant month.

If the review performed by the ISO under Section 9.3.1.3.2.1 validates that a monthly RA plan includes no capacity that will be operationally unavailable to the ISO due to an approved maintenance outage scheduled to occur during the relevant month, no replacement by specified RA replacement capacity will occur. If the review performed by the ISO under Section 9.3.1.3.2.1 validates that a monthly RA plan does include capacity that will not be operationally available due to an approved maintenance outage scheduled to occur during the month, and the load serving entity provided a list

³⁴ SDG&E Comments on Draft Final Proposal (June 4, 2012); PG&E Comments on Draft Tariff Language (August 6, 2012).

of specified RA replacement capacity, then the ISO 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 RA plan with available specified RA replacement capacity. The ISO will not accept any specified RA replacement capacity that is unavailable during the specified replacement period.³⁵

The ISO will notify the scheduling coordinator for the load serving entity and the scheduling coordinator for the resource providing the specified RA replacement capacity that the 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 that capacity. For the duration of the period that the resource is providing the specified RA replacement capacity, the resource is subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on RA resources by the ISO Tariff, including the must-offer obligations in Section 40.6 and the SCP provisions in Section 40.9, which includes the full day of the start date and the full day of the end date of the outage. The ISO agreed with the comments of SCE that the RA-related provisions would apply to the resources for the MW amount and duration of the outage replacement period.³⁶

Following replacement with specified RA replacement capacity, the ISO will determine under proposed Section 9.3.1.3.2.3 whether any capacity remaining in the monthly RA plans that will not be operationally available to the ISO due to an approved maintenance outage needs to be replaced. The ISO will make the replacement determination using five sequential steps:

- First, for each day of the month, the ISO will calculate the system total RA capacity provided in the RA plans, including the total MW of specified RA replacement capacity accepted the ISO, less the total MW of unreplaced capacity in the RA plans that is scheduled for an approved maintenance outage, and compare the resultant MW amount to the ISO system forecast monthly peak demand plus a reserve margin of 15 percent of the forecast monthly peak demand.
- Second, for each day of the month where the system total RA capacity provided in the RA plans, including the total MW of specified RA replacement capacity accepted the ISO, less the total MW of unreplaced capacity in the RA plans that is scheduled for an approved maintenance outage, exceeds the ISO system forecast monthly peak demand plus a reserve margin of 15 percent of the forecast monthly peak demand, the ISO may determine that no further replacement is required and conclude the replacement process.
- Third, for each day of the month where the system total RA capacity provided in the RA plans, including the total MW of specified RA replacement capacity

³⁵ SCE Comments on Draft Tariff Language (August 6, 2012).

³⁶ Ibid.

accepted by the ISO, less the total MW of unreplaced capacity in the RA plans that is scheduled for an approved maintenance outage, is less than the ISO system forecast monthly peak demand plus a reserve margin of 15 percent of the forecast monthly peak demand, the ISO may require replacement of RA capacity scheduled for an approved maintenance outage, as provided in Sections 9.3.1.3.2.3 and 9.3.1.3.2.4. The scheduling coordinator for each load serving entity that did not include in its RA plan available RA 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.

- Fourth, the ISO will consider whether the RA capacity scheduled for an approved maintenance outage requires replacement in the reverse order of the dates on which the outage requests were received. The RA capacity subject to the most recently requested approved maintenance outages will require replacement before the RA 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 subject to the outage will be treated as a new outage request.
- Fifth, beginning with the date of the most recent request for an approved maintenance outage during the relevant month, the ISO will either replace the unavailable RA 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 RA capacity under Section 9.3.1.3.2.5. The ISO will continue this replacement process in reverse order of the dates on which the requests for the approved maintenance outages were received until sufficient unavailable RA capacity has been replaced each day to meet the criteria set forth in Section 9.3.1.3.2.3(b).

For each day of the month where the ISO determines under Section 9.3.1.3.2.3 that replacement of RA capacity scheduled for an approved maintenance outage is required, the ISO in accordance with proposed Section 9.3.1.3.2.4 may replace the unavailable capacity with non-specified RA replacement capacity. The ISO will determine replacement by non-specified RA replacement capacity in accordance with a four-step process:

- First, the ISO will identify each load serving entity that did not include in its monthly RA plan available RA 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.
- Second, to the extent that a load serving entity provided a list of non-specified replacement capacity, the ISO 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 RA capacity included in that load serving entity's RA plan for each day where the ISO determines that replacement is required.

- Third, the ISO 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 RA plan with available non-specified RA replacement capacity. The ISO will not accept any non-specified RA replacement capacity that is unavailable during the replacement period.
- Fourth, the ISO 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 their agreement to provide the replacement capacity.

For the duration of the period that the non-specified capacity is providing RA replacement capacity, it will be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on RA resources by the ISO Tariff, including the must-offer obligations in Section 40.6 and the SCP 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.

Following replacement with specified and non-specified RA replacement capacity, any remaining unreplaced capacity in an RA plan must be replaced in accordance with proposed Section 9.3.1.3.2.5. Under this provision, for each day of the month where ISO system total available RA capacity is less than the RA reliability margin, 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 fully selected by the ISO or was unavailable during the replacement period, the ISO will notify the scheduling coordinator for the load serving entity that replacement of the RA capacity that will be operationally unavailable to the ISO due to an approved maintenance outage on that day is necessary. The ISO 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 operationally available RA capacity that meets its applicable forecasted monthly demand and reserve margin on each day of the month, and the resource does not reschedule the outage after its supply plan is submitted, the ISO may exercise its authority in Section 43.10 to procure RA maintenance outage backstop capacity.

The ISO's determination that load serving entities should be given the option to make specified and non-specified replacement capacity available to the ISO caused the ISO to restructure the replacement process to accommodate those options. The

resulting procedure is aimed at providing replacement capacity in a cost-effective and minimally burdensome manner.

The proposed tariff modifications contemplate that replacement capacity be provided on a daily basis, rather than for the entire period of the outage or for the entire month. As recognized in the Draft Final Proposal, replacement capacity may only be needed for a few days. For example, under proposed Section 9.3.1.3.2.5, the ISO may determine that, for a scheduled two-week outage at an RA resource, replacement capacity is necessary only on days five through eight, rather than on all fourteen days. Requiring replacement capacity on only those days when the ISO replacement determines it is necessary to maintain grid reliability will avoid over-procurement of RA capacity and reduce the costs borne by load serving entities.

Further, the ISO expects that the load serving entities will take cost-effectiveness into account as a factor in identifying the specified capacity they will make available to the ISO and prioritizing the order of their non-specified capacity. This provides a measure of cost control, as well as flexibility to the load serving entities in their use of the capacity they procure.

Importantly, stakeholders supported these options and the procedures the ISO developed to limit replacement to the days on which it is needed to ensure reliability rather than impose a replacement requirement on all RA capacity subject to an approved maintenance outage, regardless of the need for replacement.³⁷ PG&E's comments opposed the ISO "using the 115% Planning Reserve Margin in every hour as the LSE System RA level criteria when evaluating planned outages and the need for replacement for RA resources."³⁸ The ISO clarifies that its proposal is to assess the need for replacement of RA resources on a daily basis, not an hourly basis. The ISO did not adopt SDG&E's suggestion to consider any change to an Approved Maintenance Outage to be a new outage request. If the change is within the scope of the approved outage plan -- i.e., it decreases the amount of capacity on outage or shortens the duration of the outage -- the ISO believes that should not count as a new outage request. A decrease in the length or MWs of the outage falls within the original outage schedule that the ISO has already approved so the change should not affect the ISO's capability to accommodate the outage. Only changes that increase the scope of the approved outage plan in MW amount or duration should be treated as a new request. An increase in the length or MWs of the outage, beyond the approved original outage schedule, requires reevaluation by ISO Outage Coordination to determine whether the revised outage can still be accommodated. This reevaluation is similar to the way new requests are treated and should be handled as such.

Several stakeholder comments expressed concern that, under the ISO proposal, they would not know if an outage could be taken as a planned outage until after the monthly RA plans and supply plans had been received and processed. The suppliers'

³⁷ PG&E Comments on Draft Final Proposal (June 4, 2012); and SDG&E Comments on Draft Tariff Language, p. 4 (August 7, 2012).

³⁸ PG&E Comments on Draft Final Proposal (June 4, 2012).

comments indicated that they often submit their requests for outages months, or years, in advance and that they have to schedule many resources to make the outage happen. In response, the ISO explained in the Revised Straw Proposal that it cannot determine whether planned outages for RA resources need replacement capacity, or need to be rescheduled or cancelled, until it knows what RA capacity will be operationally available during the month. This does not occur until after the monthly RA plans are submitted and reviewed. Part of the replacement requirement is that planned outages cannot be approved unless there is sufficient RA capacity available to the ISO to ensure the reliability of the grid during the month. Under the proposal, this is determined using the RA reliability margin, which is the ISO system forecast monthly peak demand, plus a reserve margin of 15 percent of the forecast monthly peak demand. The Revised Straw Proposal noted that if the resource wants to be certain before the month-ahead RA plans and supply plans are submitted that it can take its planned outage without incurring SCP non-availability charges, it should provide replacement capacity with its outage request or not sell its capacity as RA capacity for that month. To the extent a resource holds itself out as committing to provide RA capacity for a month, it should be held to that commitment and face potential SCP charges if the capacity is not available.

Several comments expressed concern about the ramifications if the ISO cancels or rejects a planned outage after it has been approved for a RA resource and the costs that the generator could incur.³⁹ In response, the Revised Straw Proposal explained that the ISO currently has tariff authority and the responsibility to cancel or reschedule outages for reliability reasons. As under the current practice, if a RA resource has a forced outage, the approved planned outage of other RA resources will not be cancelled unless the outage threatens the reliability of the grid. To the extent that any outages must be cancelled, the ISO will apply the principle already used in outage management that the last outage accepted would be the first cancelled. The ISO emphasizes that the policy and structure under which it may cancel or deny an approved maintenance outage is not being changed by the replacement requirement. Although this issue was beyond the scope of the instant stakeholder initiative, the ISO committed at the July 2012 Board of Governors meeting to assess whether this issue should be addressed in a future stakeholder initiative.

4. Replacement Requirement for RA Resources

Under proposed Section 9.3.1.3.3.1, after the monthly supply plan has been submitted, the operator of an RA resource designated as RA 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.⁴⁰ A request for an RA maintenance outage with replacement must (i) be submitted to the ISO Outage Coordination at least three business days prior

³⁹ NRG Comments on Draft Final Proposal (June 1, 2012).

⁴⁰ The proposed definition of an RA maintenance outage with replacement is a maintenance outage, or change to an approved maintenance outage, that ISO Outage Coordination receives after the due date for the RA plans and supply plans for the resource adequacy month and that includes RA replacement capacity.

to the start of the outage, (ii) provide RA replacement capacity in an amount no less than the RA capacity designated for the resource for the duration of the scheduled outage, and (iii) otherwise comply with the requirements set forth in Section 9.

ISO Outage Coordination will consider requests for an RA maintenance outages with replacement in the order the requests are received. ISO Outage Coordination may approve the request if the outage includes the required RA replacement capacity and meets the criteria set forth in proposed Section 9.3.1.3.3.1 and existing Section 9.3.6.4.1. If the request is approved, the replacement capacity for the outage will be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on RA resources by the ISO Tariff, including, the must-offer obligations in Section 40.6 and the SCP 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.

ISO Outage Coordination may deny a request for an RA maintenance outage with replacement that is not timely submitted and/or does not provide the required RA replacement capacity for the outage. In the alternative, ISO Outage Coordination may treat it as a request for a short-notice opportunity RA maintenance outage under Section 9.3.1.3.3.3.

Under proposed Section 9.3.1.3.3.2, the operator of a resource designated as RA capacity during the resource adequacy month may submit a request for an off-peak opportunity RA maintenance outage less than ten days prior to the start of month and during the month, without a requirement to provide RA replacement capacity for the unavailable capacity for the duration of the outage. A request for an off-peak opportunity RA maintenance outage must (i) be submitted to ISO Outage Coordination at least three business 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 Manual) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manual) 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.

ISO Outage Coordination will consider requests for an off-peak opportunity RA maintenance outage in the order the requests were received. ISO Outage Coordination may approve the request if (i) 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 ISO controlled grid, and (ii) it otherwise meets the criteria set forth in Section 9. 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 portion of the outage that extends into on-peak hours will be treated by the ISO as a forced outage.

Under proposed Section 9.3.1.3.3.3, after the due date for the monthly RA plans

and supply plans, if the operator of a resource designated as RA capacity during the resource adequacy month submits a request for a planned maintenance outage, or a request to change an approved maintenance outage, that is not timely under the provisions of Section 9 and/or does not provide replacement capacity, ISO Outage Coordination may, at its discretion, deny the request, or approve the request as a short-notice opportunity RA maintenance outage, provided that ISO Outage Coordination has adequate time to analyze the request before the outage begins and the analysis determines that (i) 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 ISO controlled grid, and (ii) the outage has not already commenced as a forced outage. ISO Outage Coordination will consider short-notice opportunity RA maintenance outages in the order the requests are received. To the extent that an approved short-notice opportunity RA maintenance outage is not completed during the originally approved outage schedule, the portion of the outage that continues from the approved completion time until the time the outage is actually completed will be treated as a forced outage.

In order to make information available to market participants pertinent to the replacement requirement provisions in proposed Section 9.3.1.3, the ISO will annually post on the ISO website a calendar of the timeline of due dates for each month of the following resource adequacy compliance year. The ISO will also provide the opportunity for market participants to post and view information on an electronic bulletin board about non-RA capacity and non-specified RA capacity that may be needed or may be available as RA replacement capacity in the bilateral market. Use of the bulletin board will be voluntary and limited to use for informational purposes only.

Stakeholder comments on the Straw Proposal described the need for generators to take short maintenance outages with some frequency. The stakeholders suggested that it would be better to have these short maintenance outages occur at off-peak times, even if they would drop the level of RA capacity below 115 percent of the forecast monthly peak demand. They also suggested that being allowed to take short maintenance outages would help the generators avoid forced outages during peak periods. The ISO addressed these concerns by revising its proposal to allow RA resources to take short-term planned outages that would only occur in off-peak periods and to take a short-notice opportunity outage, without replacement capacity. Stakeholders generally support these provisions.

The ISO also agreed with PG&E to delete the criteria that the outage not reduce available RA capacity below the system planning reserve margin.⁴¹ The ISO acknowledged that system conditions may permit the ISO to accommodate off-peak opportunity outages or short-notice opportunity outages even when they may drop the available RA capacity level below the RA reliability margin.

In response to comments by SDG&E and SCE, the ISO resolved discrepancies

⁴¹ PG&E Comments on Draft Tariff Language (August 6, 2012).

in the tariff language about the advance notice required for an off-peak opportunity outage.⁴² The request must be submitted at least three business days prior to the start date of the outage rather than 72 hours in advance.

WPTF, Six Cities, GenOn, La Paloma, NCPA, NRG, and Wellhead suggested that the ISO remove the 12-hour limitation on off-peak opportunity that was initially proposed and require instead that the generating unit return to service prior to the beginning of on-peak hours.⁴³ The ISO agreed that the change was appropriate and modified its proposal accordingly.

These revisions to the ISO's original proposal are material changes. They create two new types of outages -- off-peak opportunity outages and short-notice opportunity outages -- that can be taken when grid conditions permit and without replacement capacity. The ISO believes that these opportunity outages resolve the issues stakeholders raised about the need to take frequent short maintenance outages and to avoid forced outages during peak periods. In addition, with these opportunity outages, the risk is reduced that a maintenance outage at an RA resource will require replacement by the generator.

AReM claims that the ISO's proposal does not hold RA suppliers responsible for making their generating units available and managing their planned and forced outage requirements, and instead shifts the obligations to load serving entities.⁴⁴ The ISO disagrees. The ISO proposal strikes an equitable balance between the responsibility of load serving entities to replace capacity in their RA plans that is scheduled for a maintenance outage and the responsibility of suppliers to provide replacement capacity for outages requested after the plans are submitted or to instead perform the maintenance as an off-peak opportunity outage or short-notice opportunity outage, or simply to not sell their capacity as RA capacity for the month in which maintenance is scheduled to be performed. Both load serving entities and generators bear some replacement risk, but only to the extent the ISO determines that replacement is needed.

AReM also requested that more information be provided about the process for requesting planned outages after the monthly plans are submitted and the criteria the ISO will use to determine whether to accept an outage request. The general process for requesting outages and the criteria that ISO Outage Coordination uses to assess an outage request are set forth in Section 9 of the ISO Tariff. Greater detail about the outage management process is available in the Business Practice Manual, which the ISO will supplement through the change management process to reflect process details

⁴² SDG&E Comments on Revised Tariff Language (September 6, 2012); SCE Comments on Revised Tariff Language (September 6, 2012).

⁴³ WPTF Comments on Draft Final Proposal (June 1, 2012); Six Cities Comments on Draft Final Proposal (June 1, 2012); GenOn Comments on Draft Final Proposal (June 4, 2012); La Paloma Comments on Draft Final Proposal (June 4, 2012); NCPA Comments on Draft Final Proposal (June 4, 2012); NRG Comments on Draft Final Proposal (June 1, 2012); and Wellhead comments on Draft Final Proposal (June 1, 2012).

⁴⁴ AReM comments on Draft Final Proposal (June 1, 2012).

for the replacement requirement provisions.

C. SUBMISSION AND VALIDATION OF RA PLANS AND SUPPLY PLANS

1. Submission of RA Plans and Supply Plans

The ISO's proposal modifies Sections 40.2.1.1, 40.2.2.4, and 40.2.3.4, to change the requirements for submitting RA plans to the ISO. The proposed tariff modifications require load serving entities to submit to the ISO their monthly RA plans, or the same information as the CPUC requires to be included in the plans, plus any other information the ISO requires. The due date is changed from 30 days in advance of the resource adequacy month to 45 days in advance of the resource adequacy month. The ISO proposes that the monthly RA plans for the resource adequacy month of January 2013 only, be submitted no later than 41 days in advance of the month and that the due date for the subsequent monthly plans be 45 days prior to the month. As previously discussed, the change in the due date for the resource adequacy month of January 2013 is necessary, based on the filing date of this tariff amendment, to allow for FERC's decision to issue and for the replacement requirement to become effective and apply to the submission of RA plans and the supply plans for that month.

The proposed tariff modifications to Sections 40.2.2.4 and 40.2.3.4 additionally require that load serving entities submit an annual resource adequacy plan to the ISO on a schedule and in the reporting format set forth in the Business Practice Manual. The revisions permit the scheduling coordinator for the load serving entity to submit, at any time from 45 days to 11 days in advance of the relevant month, a revision to its monthly RA plan to correct an error in the plan. The ISO will not accept any revisions to a monthly RA 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. In order to ensure that the ISO's outage replacement determination remains accurate, the revisions require that the scheduling coordinator for the load serving entity that submits a revision to its monthly RA plan to correct an error must include in the revision a MW amount of RA capacity for each day of month that is no less than the MW amount of RA capacity included in its original plan for each day of the month. In order to ensure that the amount of RA capacity required to be included in the load serving entity's RA plan is operationally available to the ISO as needed during the resource adequacy month, the monthly RA capacity is subject to the replacement requirement in Section 9.3.1.3.1.

The ISO's proposal also modifies the requirements for RA resources to submit supply plans to the ISO. Under revised Section 40.4.7.1, scheduling coordinators representing RA resources supplying RA capacity must provide the ISO with an annual supply plan on the schedule set forth in the Business Practice Manual and verify their agreement to provide RA capacity during the next resource adequacy compliance year.

Similar to revisions applicable to the load serving entities, the proposed tariff modifications require the scheduling coordinators for the RA resources to submit monthly supply plans, or the same information as required to be included in the monthly supply plan, plus any other information the ISO requires, and verify their agreement to provide RA Capacity during that resource adequacy month. The ISO is proposing to change the due date for the monthly supply plans from 30 days in advance of the resource adequacy month to 45 days in advance of the resource adequacy month. Consistent with the tariff modifications applicable to the monthly RA plans, the ISO proposes that the monthly supply plans for the resource adequacy month of January 2013 be submitted no later than 41 days in advance of the month and that the due date for monthly plans thereafter be 45 days prior to the resource adequacy month.

The revisions permit the scheduling coordinator for the RA resource to submit, at any time from 45 days to 11 days in advance of the relevant month, a revision to its monthly supply plan to correct an error in the plan. The ISO 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 RA resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

The requirement to submit the RA plans and supply plans, or the same information as the CPUC requires in the plans, is intended to cover both the CPUC jurisdictional load serving entities and the non-CPUC jurisdictional load serving entities that serve end users within the ISO balancing authority area. The change in the due date is necessary to allow the ISO additional time to conduct its proposed validation and replacement process before the start of the month.

Initially, the ISO's Straw Proposal suggested that the due date for the submission of RA plans and supply plans be changed from 30 days prior to the month to 90 days prior to the month. In the Revised Straw Proposal, the ISO changed the date for submitting RA plans and supply plans to 45 days in advance of the month. The majority of stakeholders opposed moving the submissions 90 days before the month. The comments provided numerous reasons for their opposition, including potential problems with contracting and determining the forecasts to be used for monthly showings. The CPUC's comments specifically opposed monthly showings at 90 days before the month, but also suggested that a 45-day time frame would afford both the ISO and CPUC the additional time needed to process RA showings. The CPUC stated that "even if a compromise agreement of a 45 day timeframe is not a perfect fit for everyone, it would provide less disruption of other RA program processes while providing the CAISO with a bit more time to manage outages."⁴⁵ In accordance with stakeholder feedback, and especially in light of CPUC's comments, the ISO revised its proposal to provide that the monthly RA plans and supply plans will be due to the ISO 45 days prior to the month.

⁴⁵ CPUC Comments on Revised Straw Proposal (May 10, 2012).

The additional time is needed by the ISO to undertake the proposed review of the monthly RA plans and supply plans, conduct its outage replacement analysis, and ensure that load serving entities and resources have sufficient time to cure any potential deficiencies that might be discovered during the validation process. Following initial implementation of the replacement requirement provisions, the ISO's review and replacement process will have significant manual aspects.⁴⁶ The additional 15 days is needed to accommodate the manual processes, which will require more time to complete than the processes performed today and to ensure that the analysis is correct. A process that does not produce an accurate replacement analysis could increase the costs of procurement.

SDG&E's comments expressed preference for the 30-day-ahead submission, but did not adamantly oppose the 45-day in advance deadline, provided that the ISO works with the CPUC to change other dates in the RA process by 45 days. PG&E's and AReM's comments suggested similar coordination. The ISO is actively involved in the CPUC RA proceeding that is considering changing the due date for the RA plans and supply plans so that the dates for submitting information to the CPUC and the ISO will be the same.⁴⁷

2. Validation of Supply Plans

The proposed revisions to Section 40.4.7.3 provide for the ISO to verify whether the RA capacity listed in a monthly supply plan is scheduled to take an approved maintenance outage during the month. To the extent the RA capacity of an RA resource included in a supply plan is greater than the RA capacity designated for the resource in the load serving entity's RA plan, or includes RA capacity that is scheduled for an approved maintenance outage during the month, the ISO will notify the scheduling coordinator for the RA resource and the respective scheduling coordinators for each load serving entity that included the resource in its RA plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7. To the extent the RA capacity of an RA resource included in a supply plan is less than the RA capacity designated for the resource in the RA plan, or includes RA capacity that is scheduled for an approved maintenance outage during the month, the ISO will notify the local regulatory authority, the scheduling coordinator for the RA resource, and the respective scheduling coordinators for each load serving entity that included the resource in its RA plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7. The ISO proposal also revises Section 40.6 to require that scheduling

⁴⁶ Examples of the manual processes include: obtaining approved outage information for RA resources and breaking it down into daily time segments, validating the approved outage data and the RA and supply plan data, validating for each individual load serving entity's planning reserve margin, performing the RA reliability margin check, replacing with non-specified capacity and updating the monthly plans, communicating supply plan changes to suppliers, analyzing the need for backstop procurement, and communicating notice of RA maintenance outage backstop capacity procurement to the load serving entity and supplier.

⁴⁷ SDG&E Comments on Draft Final Proposal (June 4, 2012); and AReM Comments on Draft Final Proposal (June 1, 2012).

coordinators supplying RA capacity make the RA capacity listed in the scheduling coordinator's monthly supply plans under Section 40.4.7 available to the ISO each hour of each day of the reporting month in accordance with this Section 40.6 and Section 9.3.1.3.

Some stakeholders objected to the provision that would allow the ISO to disclose a discrepancy to the local regulatory authority and claimed that such disclosure would penalize the load serving entity.⁴⁸ The ISO notes that the proposed disclosure is consistent with the ISO's current validation practice. As part of its validation process, the ISO already provides to the CPUC its findings of any discrepancies where the RA capacity of an RA resource included in a supply plan is less than the RA capacity designated for the resource in the RA plan and also provides outage information for the RA resources.⁴⁹ Accordingly, the ISO is not persuaded that providing virtually the same information to the CPUC as it does today, in accordance with its Commission-approved tariff, will increase the load serving entity's risk of receiving a penalty.

3. Compliance

The proposed tariff modifications to Section 40.7 incorporate the replacement requirement and validation process into the provisions that address ISO review of the RA plans and supply plans.

The ISO is proposing to revise Section 40.7(a) to impose a requirement that, in performing its evaluation of the RA plans and supply plans, if the ISO identifies a discrepancy in a plan, it will provide notification to the listed entities at least 25 days in advance of the first day of the month covered by the plan and will include the reasons why the ISO believes a deficiency exists.

Section 40.7(b) is a new provision that requires the ISO to evaluate whether each monthly RA plan submitted by a scheduling coordinator for a load serving entity demonstrates operationally available RA 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 ISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, if a monthly RA plan (i) includes capacity scheduled for 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 RA capacity equal to or greater than the load serving entity's applicable forecasted monthly demand and reserve margin, the ISO 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 RA resource scheduled for the 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 ISO believes an outage replacement

⁴⁸ SCE Comments on Draft Tariff Language (June 1, 2012) and Comments on Revised Tariff Language (September 6, 2012).

⁴⁹ See existing ISO Tariff Section 40.7.

requirement exists. At least ten days prior to the resource adequacy month, the scheduling coordinator for either the load serving entity or the RA resource may demonstrate that the identified outage replacement requirement is cured by submitting a revision or update to the monthly RA plan or supply plan, as applicable. If neither the scheduling coordinator for the load serving entity nor the scheduling coordinator for the RA resource timely advises the ISO that the identified outage replacement requirement is cured, the ISO may exercise its authority in Section 43.10, to procure RA maintenance outage backstop capacity.

These proposed tariff modifications are necessary to incorporate the replacement requirement and validation process into the provisions that address ISO review of the RA plans and supply plans. The revisions establish the process for the ISO to provide notice of any discrepancies it identifies in reviewing the plans and to allow an opportunity for the load serving entity or the RA resource on outage to cure the discrepancy before the ISO may exercise backstop procurement. No stakeholder has objected to the revisions.

In comments, GenOn questioned the provision that requires replacement capacity for scheduled maintenance outages be provided at least 10 days prior to the start of the resource adequacy month.⁵⁰ GenOn suggested that allowing replacement up to 72 hours in advance of the outage would be more consistent with the ISO's existing outage management provisions. The ISO notes that the deadline for providing replacement capacity under Section 40.7(b) is part of the cure period for instances where the ISO determines that RA capacity on outage on a particular day is subject to replacement. The replacement capacity must be provided sufficiently in advance of the month in order for the ISO determine whether the deficiency has been corrected and whether backstop is necessary. The 72-hour notice GenOn suggests would not leave enough time for the ISO to make that evaluation and engage in backstop procurement if necessary.

AReM's comments suggested that the ISO modify Section 40.7(b) to require the ISO to notify load serving entities 25 days in advance of the resource adequacy month that their replacement requirement has been excused.⁵¹ AReM's suggestion is not consistent with the replacement requirement process the ISO poses. If the criteria under Section 9.3.1.3.5 are met, the load serving entity has a replacement requirement and the ISO will provide notice of the requirement. If the criteria are not met, there is no replacement requirement, so there is no obligation to excuse.

In response to comments by SCE and SDG&E, the ISO resolved discrepancies in the tariff language about the due date for submissions to show that the outage replacement requirement has been cured.⁵² The submission must be provided to the

⁵⁰ GenOn Comments on Draft Final Proposal (June 4, 2012).

⁵¹ AReM Comments on Draft Tariff Language (August 6, 2012).

⁵² SCE Comments on Revised Tariff Language (September 6, 2012); and SDG&E Comments on Revised Tariff Language (September 6, 2012).

ISO at least 11 days in advance of the start of the resource adequacy month.

D. RA MAINTENANCE OUTAGE BACKSTOP CAPACITY PROCUREMENT

1. Designation Authority

While the purpose of the RA program is to ensure that adequate RA capacity is available when and where needed to serve load, meet applicable reserve requirements, and support reliable operation of the ISO controlled grid, there nevertheless may be circumstances in which ISO system total available RA capacity on a given day may be less than the RA reliability margin. In such circumstances, if the ISO determines that there is a need to replace RA capacity scheduled to take a maintenance outage, and either the load serving entity does not replace the needed capacity or the RA resource does not reschedule or cancel its planned outage, the ISO will be short the operationally available RA capacity it needs. It is, therefore, imperative that the ISO have the appropriate tools at its disposal in such circumstances in order to maintain reliable operations. This proposal establishes the authority for the ISO to procure RA maintenance outage backstop capacity as a new form of backstop procurement that may be used for those days where the replacement need was not met.

Proposed Section 43.10.1 authorizes the ISO to designate capacity in accordance with Section 43.10.2 to provide RA maintenance outage backstop capacity services on each day during the month where (i) the ISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, (ii) the load serving entity's monthly RA plan includes RA capacity scheduled for an approved maintenance outage, (iii) such unavailable capacity was not replaced with RA replacement capacity pursuant to Sections 9.3.1.3.1 or 9.3.1.3.2, and (iv) the load serving entity's monthly RA plan fails to demonstrate operationally available RA capacity equal to or greater than the load serving entity's applicable forecasted monthly demand and reserve margin; provided that the ISO cannot designate RA maintenance outage backstop capacity until after the scheduling coordinator for the load serving entity or the scheduling coordinator for the RA resource scheduled for the outage have the opportunity to cure the outage replacement requirement as set forth in Section 40.7. The ISO may exercise its authority to designate RA maintenance outage backstop capacity to ensure that sufficient RA capacity is operationally available to meet the RA reliability margin. The ISO must endeavor to finalize the designation at least one day in advance of the start of the resource adequacy month.

As discussed below, the features of this backstop procurement are narrowly tailored to the short-term replacement of RA capacity on outage. The proposed backstop mechanism is markedly different from the existing capacity procurement mechanism in two key aspects. The biggest difference is the length of term of the designation – the RA maintenance outage backstop capacity has a daily term, which may extend from one day to 31 days, depending on the period of time that the ISO

determines the outage must be replaced. In contrast the CPM designations have terms at least one-month long, and in the case of an exceptional dispatch CPM designation for a non-system reliability need, the initial term is 60 days. Another significant difference is the payment calculation. Under an RA maintenance outage backstop capacity designation, there is only one payment option available. The payment is equal the product of the number of days the resource provides RA maintenance outage backstop capacity multiplied by the MW amount of the backstop capacity provided net of any maintenance outages or forced outages, multiplied by the fixed CPM capacity price, on a pro rata daily basis, in effect pursuant to Section 43.7.1. Because of the short-term duration of an RA maintenance outage backstop capacity designation, the ISO eliminated the options to request a resource-specific payment price or submit a specific going forward offer price. This makes the process more administratively efficient given the short-term circumstances and does not harm anyone because acceptance of any designation on the part of a supplier remains voluntary.

The ISO submits that the proposed provisions for the RA maintenance outage backstop capacity designation are reasonable and appropriate for the purpose of this mechanism, which is the replacement of RA capacity on a maintenance outage, as needed on a daily basis, so that ISO system total available RA capacity meets the RA reliability margin. The horizon of the backstop is the short-term. Limiting the term of the designation to the replacement period identified by the ISO is consistent with that short-term horizon. In addition, it will avoid over-procurement of RA capacity on days where the reliability criteria have already been met and will thereby reduce procurement costs. The proposed backstop procurement was not opposed during the stakeholder initiative. The ISO submits that the RA maintenance outage backstop authority is a necessary and appropriate mechanism to procure capacity from existing resources as needed for reliable grid operations using a transparent and efficient tariff-based process, and that the Commission should find it just and reasonable.

The ISO further submits that the addition of the RA maintenance outage backstop capacity procurement authority to the ISO Tariff is not inconsistent with the settlement reached and approved by the Commission in the CPM proceeding. On February 16, 2012, the Commission issued an Order approving the parties' uncontested settlement to resolve all issues raised in the proceeding regarding the CPM and the exceptional dispatch mitigation provisions in its tariff.⁵³ As approved in that order:

the Revised Tariff Provisions will be effective as of the Settlement Order Date and pursuant to Section 43.7.1 will expire as of the fourth anniversary of the Settlement Order Date ("Expiration Date"). The Revised Tariff Provisions relating to price, quantity, and term of a CPM designation for capacity procurement that is subject to Section 43 of the CAISO Tariff, as it exists as of the Settlement Order Date, will not be subject to change during the four-year term of this Offer of Settlement. However, nothing in this Offer of Settlement is intended to prejudice or limit the CAISO's authority to make a filing with the Commission pursuant to section 205 of

⁵³ *Cal. Indep. Sys. Operator Corp.*, 138 FERC ¶ 61,112 (2012).

the Federal Power Act (“FPA”), or other parties’ exercise of their rights under FPA section 205 or 206, regarding any capacity procurement that is not subject to Section 43 of the CAISO Tariff, as it exists as of the Settlement Order Date, and to propose for such new CPM Capacity procurement any compensation or other provisions, which may be the same as or different from the Revised Tariff Provisions. Without limiting the scope of the previous sentence, nothing in this Offer of Settlement is intended to prejudge or limit any party’s rights under FPA section 205 or 206 with respect to any FERC docket that might arise in connection with the CAISO’s December 6, 2011, Report on Basis and Need for CPM Designation for Sutter Energy Center. Nothing in this Offer of Settlement is intended to prejudge or limit any party’s position or rights under FPA section 205 or 206 with respect to whether the Revised Tariff Provisions should remain in effect, or be modified or replaced, after the Expiration Date.

The RA maintenance outage backstop capacity procurement authority proposed in the instant proceeding is being submitted to the Commission for approval pursuant to section 205 of the Federal Power Act. The proposed backstop authority will establish new backstop procurement provisions for RA maintenance outages that are not subject to Section 43 of the ISO Tariff, as it existed as of the Settlement Order Date. Accordingly, the proposed backstop authority does not conflict with the settlement terms.

2. Selection and Terms of Designation

New Section 43.10.2 provides that, in accordance with good utility practice, the ISO will designate RA maintenance outage backstop capacity from operationally available capacity, excluding the capacity of generating units, system units, system resources, or participating load that is already designated as an RA resource, under an RMR contract, or designated as CPM capacity during the replacement period, and excluding a participating generator or participating load that has filed notice to terminate its participating generator agreement, QF PGA, pseudo-tie participating generator agreement, or participating load agreement or withdraw the capacity from its participating generator agreement, QF PGA, pseudo-tie participating generator agreement, or participating load agreement.

The ISO will select the RA maintenance outage backstop capacity by considering the following criteria in the order listed:

- (1) the availability of non-specified RA capacity from other load serving entities and the availability of capacity from other resources;
- (2) capacity that has similar operating characteristics to the capacity on outage;

- (3) the capacity costs associated with the available capacity; and
- (4) the quantity of a resource's available capacity, based on the resource's PMin, relative to the remaining amount of capacity needed.

The ISO will apply the first criterion to identify the pool of available capacity for backstop from available non-specified RA capacity that other load serving entities have procured but did not designate as RA capacity and the capacity available from other resources during the relevant resource adequacy month. GenOn, La Paloma, and Wellhead requested that the ISO clarify its proposal to indicate that the ISO will consider all available resources and not limit the selection to those resources available from load serving entities.⁵⁴ The ISO believes that the criterion is clear that resources from all sources will be considered, so no modification is required.

The ISO will apply the second criterion by endeavoring to select capacity that has similar operating characteristics to the capacity on outage. The ISO will apply the third criterion by considering the cost of the available capacity, with the goal of selecting a lower cost resource. The ISO will apply the fourth criterion by considering the quantity of a resource's available capacity. The ISO will endeavor to select a resource that has a PMin at or below the needed amount of capacity before selecting a resource that has a PMin that would result in over-procurement.

If after applying these criteria, two or more resources that are eligible for designation equally satisfy these criteria, the ISO will utilize a random selection method to determine the designation between those resources. The ISO will not designate the capacity of a resource for an amount of capacity that is less than the resource's PMin. In comments on the draft tariff language, SDG&E opposed the random selection process and suggested that the ISO instead determine the designation in accordance with best utility practices and/or other criteria the ISO determines to be in the best interest of the market. The ISO opted not to make the suggested change because the use of the random selection process to select a resource after applying the criteria is consistent with the random selection process used for the ISO's CPM as approved by the Commission. Because the automated random selection process already in place is easy to administer and is non-discriminatory, the ISO opted to use that same process for the selection of RA replacement backstop capacity.

Under new Section 43.10.3, RA maintenance outage backstop capacity designated under Section 43.10.1 will have a minimum commitment of one day and a maximum commitment of 31 days. The term of the designation may not extend into the subsequent resource adequacy compliance month. If the replacement period may continue into the following resource adequacy compliance month, the ISO will consider the need to procure RA maintenance outage backstop capacity for that portion of the replacement period as part of the ISO's validation of the load serving entity's RA plan

⁵⁴ GenOn Comments on Draft Final Proposal (June 4, 2012); WPTF Comments on Draft Final Proposal (June 1, 2012); La Paloma comments on Final Draft Proposal (June 4, 2012); and Wellhead comments on Draft Final Proposal (June 1, 2012).

for the next month pursuant to Section 40.2.2.4 or 40.2.3.4.

Under new Section 43.10.4, the decision to accept a designation as RA maintenance outage backstop capacity is voluntary for the scheduling coordinator for any resource. If the scheduling coordinator for a resource accepts the designation, it is obligated to perform for the full quantity and full period of the designation.

Under new Section 43.10.5, capacity from resources designated as RA maintenance outage backstop capacity are subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on RA resources by the ISO Tariff, including the must offer obligations in Section 40.6 and the SCP provisions in Section 40.9 for the MW amount and duration of the replacement period, which includes the day of the start date and the day of the end date of the outage. If the ISO has not received an economic bid or a self-schedule for RA maintenance outage backstop capacity, the ISO will utilize a generated bid in accordance with the procedures specified in Section 40.6.8.

Under new Section 43.10.6, payment will be made to the scheduling coordinator for the resource that received the designation to provide RA maintenance outage backstop capacity or to the scheduling coordinator for the load serving entity that offered the non-specified RA capacity procured as RA maintenance outage backstop capacity. Some load serving entities have a portfolio of resources from which select capacity to designate as RA capacity for the month. This provision creates an opportunity for the load serving entities to provide backstop capacity from the portfolio of capacity that was not designated as RA for the month. The payment will equal the product of the number of days the resource provides backstop capacity multiplied by the MW amount of backstop capacity provided net of any maintenance outages or forced outages, multiplied by the fixed CPM capacity price, on a pro rata daily basis, in effect pursuant to Section 43.7.1.

Under new Section 43.10.7, the cost of the payments made for a RA maintenance outage backstop capacity designation will be allocated to the scheduling coordinator for the load serving entity whose monthly RA plan fails to have sufficient operationally available RA capacity and RA replacement capacity to comply with the load serving entity's applicable forecasted monthly demand and reserve margin. Such costs will be assigned in proportion to the MW amount of RA maintenance outage backstop capacity attributable to the individual load serving entity.

Allocating the costs of the backstop capacity procured in the month-ahead time frame to the load serving entity is intended to create the incentives for load serving entities to work collaboratively with the generators on outage scheduling and to provide non-specified RA replacement capacity as a more cost-effective alternative to backstop procurement costs. CPUC staff recommends that the cost of RA maintenance outage backstop capacity procurement be allocated to all scheduling coordinators for load serving entities.⁵⁵ The ISO disagrees with that approach. The ISO believes that

⁵⁵ CPUC Staff Comments on the Draft Final Proposal (June 15, 2012).

allocating the backstop costs to the load serving entities(s) whose monthly RA plan failed to have sufficiently operationally available RA capacity and RA replacement capacity (if required by the ISO) to comply with the load serving entity's applicable forecasted monthly demand and reserve margin will more fairly allocate the costs to the cost causer than the broad-based allocation the CPUC recommends. Scheduling coordinators for load serving entities that have provided sufficient operationally available RA capacity for the month should not be forced to bear the costs of replacement capacity to backstop load serving entities that do not. This would result in inappropriate cost shifting and subsidization. This approach is consistent with the current CPM allocation scheme which the Commission has found to be just and reasonable. The same reasons underlying that allocation scheme support the allocation scheme proposed herein.

Finally, under new Section 43.10.8, the ISO must issue a market notice within five business days of an RA maintenance outage backstop capacity designation that includes a description of the cause of the designation, the name of the resource(s) procured, and the term and MW amount of the designation. SCE comments suggested that the ISO also identify the deficiencies that lead to the backstop procurement so that the load serving entity may assign any associated charges to the supplier under contractual terms.⁵⁶ In response to comments from SCE, the ISO has added a requirement that at the end of each resource adequacy month, the ISO will notify each load serving entity that is allocated payment costs under Section 43.10.7 of the identity of the RA resource that required backstop procurement and the identity of the RA resource that provided the RA maintenance outage backstop capacity.

IV. EFFECTIVE DATE

The ISO requests that the Commission accept the tariff revisions proposed in the instant filing, without modification, suspension or hearing, so they become effective and can be implemented on November 20, 2012, which is 61 days after the date of this filing. The ISO will apply the proposed tariff modifications beginning with the resource adequacy month of January 2013, which coincides with the expiration of the California Public Utilities Commission's ("CPUC") replacement rule on December 31, 2012, as discussed below. The ISO requests that the proposed tariff modifications become effective on November 20, 2012 rather than January 1, 2013 because the revised provisions for the most part apply to the submission of the monthly RA plans and supply plans, and the ISO's review and validation of those plans, which process occurs before the start of the resource adequacy month. The ISO is requesting the effective date of November 20, 2012 in order for the revised provisions to be in effect when the monthly plans are due on November 21, 2012, which is 41 days in advance of the January 2013 resource adequacy month.

For the resource adequacy month of January 2013 only, the ISO proposes that the monthly RA plans and supply plans be submitted no later than 41 days in advance of

⁵⁶ SCE Comments on the Draft Final Proposal (June 1, 2012).

the month. Thereafter, the due date for the monthly plans will be 45 days prior to the month. The change in the due date for the resource adequacy month of January 2013 is necessary, based on the filing date of this tariff amendment, to allow for FERC's decision to issue and for the replacement requirement to become effective and apply to the submission of RA plans and the supply plans for that month. The 41-day advance submission date will afford market participants a few extra days to prepare their plans, and will shorten the ISO's time for review and validation of the plans by the same few days, but will not extend the remainder of the replacement requirement schedule.

V. EXPENSES

No expense or cost associated with this filing has been alleged or judged in any judicial proceeding to be illegal, duplicative, unnecessary, or demonstratively the product of discriminatory employment practices.

VI. COMMUNICATIONS

Correspondence and other communications regarding this filing should be directed to the following individuals. The individuals identified with an asterisk are the persons designated for service pursuant to 18 C.F.R. § 203(b)(3) with respect to this proceeding.

*Anthony Ivancovich,
Assistant General Counsel
*Beth Ann Burns
Senior Counsel
California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7146
Fax: (916) 608-7222
bburns@caiso.com

VII. SERVICE

The ISO has served copies of this transmittal letter, and all attachments, on the Public Utilities Commission of the State of California, the California Energy Commission, and all parties with Scheduling Coordinator Agreements under the ISO Tariff. In addition, the ISO has posted a copy of the filing on the ISO Website.

VIII. CONTENTS OF THIS FILING

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

Attachment A: Revised ISO tariff sheets -- clean

- Attachment B: Revised ISO tariff sheets – blackline
- Attachment C: ISO’s Draft Final Proposal, Replacement Requirement for Scheduled Generation Outages
- Attachment D: Memorandum to the ISO Board of Governors Re Decision on Replacement Requirement for Scheduled Generation Outages

IX. CONCLUSION

For the foregoing reasons, the ISO respectfully requests that the Commission accept the tariff revisions proposed in the instant filing, without modification, suspension or hearing, so they become effective and can be implemented 60 days after the date of this filing.

Respectfully submitted,

/s/ Beth Ann Burns _____

Nancy Saracino
General Counsel,
Anthony Ivancovich
Assistant General Counsel
Beth Ann Burns
Senior Counsel,
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7146
Fax: (916) 608-7222
bburns@caiso.com

September 20, 2012

Attachment A – Clean Tariff

Replacement Requirement for RA Maintenance Outages Amendment Filing

California Independent System Operator

Fifth Replacement FERC Electric Tariff

September 20, 2012

Appendix A

Master Definition Supplement

* * * *

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.

* * * *

Off-Peak Opportunity RA Maintenance Outage – A Maintenance Outage for a Resource Adequacy Resource that is approved by the CAISO Outage Coordination Office to be initiated and completed during off-peak hours (as specified in the Business Practice Manual) without RA Replacement Capacity.

* * * *

RA Maintenance Outage Backstop Capacity – RA Maintenance Outage Backstop Capacity procured under Section 43.10.

RA Maintenance Outage With Replacement – A Maintenance Outage, or change to an Approved Maintenance Outage, that the CAISO Outage Coordination Office receives after the due date for the Resource Adequacy Plans and Supply Plans for the resource adequacy month and that includes RA Replacement Capacity.

RA Reliability Margin – The CAISO system forecast monthly peak Demand, plus a reserve margin of 15 percent of the forecast monthly peak Demand, based on the forecast prepared by the California Energy Commission.

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.

* * * *

Short-Notice Opportunity RA Maintenance Outage – Maintenance Outage, or change to an Approved Maintenance Outage, for a Resource Adequacy Resource that does not qualify as an RA Maintenance Outage With Replacement or Off-Peak Opportunity RA Maintenance Outage, but that the CAISO Outage Coordination Office can accommodate on short notice without RA Replacement Capacity.

* * * *

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.

* * * *

9. Outages

* * * *

9.3 Coordination Of Outages And Maintenance

* * * *

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 Outage Coordination Office may take into consideration the status of a Generating Unit as a Resource Adequacy Resource. The CAISO Outage Coordination Office 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 ISO 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 in advance of the resource adequacy month but does not receive approval or denial of the request by the CAISO Outage Coordination Office as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO Outage Coordination Office, 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. Notwithstanding this provision, for the resource adequacy month of January 2013, if a Resource Adequacy Resource requested a planned Maintenance Outage, or change to an Approved Maintenance Outage, more

than forty-two days in advance of the resource adequacy month but does not receive approval or denial of the request by the CAISO Outage Coordination Office as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO Outage Coordination Office, 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 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 Manual, 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 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 RA Maintenance Outage Backstop Capacity pursuant to Section 43.10; and
- (d) Be submitted in the format required by the Business Practice Manual.

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 their 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 in Section 43.10 to procure RA Maintenance Outage Backstop Capacity.

9.3.1.3.3 Replacement Requirement for RA Resources

9.3.1.3.3.1 RA Maintenance Outage Requests With Replacement

After the monthly Supply Plan has been submitted, the Operator 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. A request for an RA Maintenance Outage With Replacement must (i) be submitted to the CAISO Outage Coordination Office at least three Business 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. The CAISO Outage Coordination Office will consider requests for an RA Maintenance Outage With Replacement in the order the requests are received. The CAISO Outage Coordination Office may approve the request if the outage includes the required RA Replacement Capacity and meets the criteria set forth in this Section 9.3.1.3.3.1 and Section 9.3.6.4.1. The RA Replacement Capacity for an RA Maintenance Outage With Replacement 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. The CAISO Outage Coordination Office may deny a request for an RA Maintenance Outage With Replacement that is not timely submitted and/or does not provide the required RA Replacement Capacity for the outage, or may treat it as a request for a Short-Notice Opportunity RA Maintenance Outage under Section 9.3.1.3.3.3.

9.3.1.3.3.2 Off-Peak Opportunity RA Maintenance Outages

The Operator of a resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage from ten days prior to the start of month until three business days prior to the end of the month, without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage. A request for an Off-Peak Opportunity RA Maintenance Outage must (i) be submitted to the CAISO Outage Coordination Office at least three Business 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 Manual) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manual) 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. The CAISO Outage Coordination Office will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received. The CAISO Outage Coordination Office may approve the request if (i) 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 (ii) it otherwise meets the criteria set forth in Section 9. 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 portion of the outage that extends into on-peak hours will be treated as a Forced Outage.

9.3.1.3.3.3 Short-Notice Opportunity RA Maintenance Outages

After the due date for the monthly Resource Adequacy Plans and Supply Plans and until the end of the resource adequacy month, the Operator of a resource designated as Resource Adequacy Capacity during the month may submit a request for a planned Maintenance Outage or a request to change an Approved Maintenance Outage that is not timely under the provisions of Section 9 and/or does not provide replacement capacity. The CAISO Outage Coordination Office may, at its discretion, deny the request, or approve the request as a Short-Notice Opportunity RA Maintenance Outage; provided that the CAISO Outage Coordination Office has adequate time to analyze the request before the outage begins and the analysis determines that (i) 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 (ii) the outage has not already commenced as a Forced Outage. The CAISO Outage Coordination Office will consider Short-Notice Opportunity RA Maintenance Outages in the order the requests are received. To the extent that an approved Short-Notice Opportunity RA Maintenance Outage is not completed during the originally approved outage schedule, the portion of the outage that continues from the approved completion time until the time the outage is actually completed will be treated as a Forced Outage.

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. Resource Adequacy Demonstration for All SCs In The CAISO BAA

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40.2.1.1 Requirements for CPUC Load Serving Entities Electing Reserve Sharing LSE Status

- (a) The Scheduling Coordinator for a CPUC Load Serving Entity electing Reserve Sharing LSE status 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.
- (f) Notwithstanding Section 40.2.1.1(a) and (e), for the resource adequacy month of January 2013, 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 later than November 20, 2012, which is 42 days in advance of the first day of the month.

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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) electing Reserve Sharing LSE status 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.
- (f) Notwithstanding Section 40.2.2.4(b), for the resource adequacy month of January 2013, 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 later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.2.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the Load Serving Entity may submit at any time from 42 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.

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40.2.3.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide annual and monthly Resource Adequacy Plans, for each Modified Reserve Sharing LSE served by the Scheduling Coordinator, 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 Modified Reserve Sharing LSE 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 the resources the Modified Reserve Sharing LSE will rely upon to satisfy its forecasted monthly Demand and Reserve Margin as set forth in Section 40.2.3.1, for the relevant reporting period and 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 Resource Adequacy Capacity required to be included in the Load Serving Entity's monthly 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.

- (f) Notwithstanding Section 40.2.3.4(b), for the resource adequacy month of January 2013, 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 later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.3.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the Load Serving Entity may submit at any time from 42 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.

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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 RA Maintenance Outage Backstop Capacity pursuant to Section 43.10, 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.
- (e) Notwithstanding Section 40.4.7.1(b), for the resource adequacy month of January 2013, the monthly Supply Plans or the same information as required to be included in the monthly Supply Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.2.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the resource adequacy resource may submit at any time from 42 days through 11 days in advance of the relevant month, a revision to its monthly Supply Plan to correct an error in the plan.

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40.4.7.3 Validation of Supply Plans

The CAISO shall be entitled to take reasonable measures to validate the accuracy of the information submitted in Supply Plans under this Section. Supply Plan validation measures may include the following:

- (a) The CAISO may compare a Resource Adequacy Resource's Resource Adequacy Capacity against the Resource Adequacy Resource's Net Qualifying Capacity, if applicable. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is

greater than the Resource Adequacy Resource's Net Qualifying Capacity, the CAISO will notify the respective Scheduling Coordinators for the Resource Adequacy Resource and each Load Serving Entity that has included the Resource Adequacy Resource in its Resource Adequacy Plan that the Resource Adequacy Capacity from the Resource Adequacy Resource shall be reduced to the Resource Adequacy Resource's Net Qualifying Capacity and that it will be considered a mismatch under Section 40.7. If the CAISO is not advised as to how the reduction in Resource Adequacy Capacity to conform with the Resource Adequacy Resource's Net Qualifying Capacity shall be allocated among each Load Serving Entity that included the Resource Adequacy Resource on its Resource Adequacy Plan, the CAISO will apply a pro rata reduction based on the Supply Plan.

- (b) The CAISO may verify whether the Resource Adequacy Capacity listed in the monthly Supply Plan is scheduled to take an Approved Maintenance Outage during the month. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is greater than the Resource Adequacy Capacity designated for the resource in the Resource Adequacy Plan, or includes Resource Adequacy Capacity that is scheduled to take an Approved Maintenance Outage during the month, the CAISO will notify the Scheduling Coordinator for the Resource Adequacy Resource and the respective Scheduling Coordinators for each Load Serving Entity that has included the Resource Adequacy Resource in its Resource Adequacy Plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is less than the Resource Adequacy Capacity designated for the resource in the

Resource Adequacy Plan, or includes Resource Adequacy Capacity that is scheduled for an Approved Maintenance Outage during the month, the CAISO will notify the Local Regulatory Authority, the Scheduling Coordinator for the Resource Adequacy Resource, and the respective Scheduling Coordinators for each Load Serving Entity that has included the Resource Adequacy Resource in its Resource Adequacy Plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7.

- (c) Other errors or inaccuracies identified by the CAISO in a Supply Plan shall be treated as a mismatch under Section 40.7.

Disputes regarding the CAISO's determination of Net Qualifying Capacity shall be subject to Section 40.5.2. The provisions of this Section shall not affect a Resource Adequacy Resource's Net Qualifying Capacity posted by the CAISO under Section 40.5.2.

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40.6 Requirements For SCs And Resources For Reserve Sharing LSEs

This Section 40.6 does not apply to Resource Adequacy Resources of Load following MSSs and those entities that participate in the Modified Reserve Sharing LSE program under Section 40.5. Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity listed in the Scheduling Coordinator's monthly Supply Plans under Section 40.4.7 available to the CAISO each hour of each day of the reporting month in accordance with this Section 40.6 and Section 9.3.1.3.

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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 in Section 43.10, to procure RA Maintenance Outage Backstop Capacity.

- (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 43.

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40.7.2 Penalties For Non-Compliance

The failure of a Resource Adequacy Resource or Resource Adequacy Capacity to be available to the CAISO in accordance with the requirements of this Section 40 or Section 9.3.1.3, and the failure to operate a Resource Adequacy Resource by placing it online or in a manner consistent with a submitted Bid or Generated Bid shall be subject to the applicable Sanctions set forth in Section 37.2.4. However, any failure of the Resource Adequacy Resource to satisfy any obligations prescribed under this Section 40 or Section 9.3.1.3 during a Resource Adequacy Compliance Year for which Resource Adequacy Capacity has been committed to a Load Serving Entity shall not limit in any way, except as otherwise established under Section 40.4.5 or requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable, the ability of the Load Serving Entity to whom the Resource Adequacy Capacity has been committed to use such Resource Adequacy Capacity for purposes of satisfying the resource adequacy requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable. In addition, a Reserve Sharing LSE shall not be subject to any sanctions, penalties, or other compensatory obligations under this Section 40 on account of a Resource Adequacy Resource's satisfaction or failure to satisfy its obligations under this Section 40 or Section 9.3.1.3.

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43. Backstop Procurement

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43.10 RA Maintenance Outage Backstop Capacity Procurement

43.10.1 Designation

The CAISO shall have the authority to designate capacity in accordance with Section 43.10.2 to provide RA Maintenance Outage Backstop Capacity services on each day during the resource adequacy month where (i) the CAISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, (ii) the Load Serving Entity's monthly Resource Adequacy Plan includes Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, (iii) such unavailable capacity was not replaced with RA Replacement Capacity pursuant to Sections 9.3.1.3.1 or 9.3.1.3.2, and (iv) the Load Serving Entity's monthly Resource Adequacy Plan fails to demonstrate operationally available Resource Adequacy Capacity equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. However, the CAISO shall not designate RA Maintenance Outage Backstop Capacity under this Section 43.10.1 until after the Scheduling Coordinator for the Load Serving Entity and the Scheduling Coordinator for the Resource Adequacy Resource scheduled to take the Approved Maintenance Outage have the opportunity to cure the outage replacement requirement as set forth in Section 40.7. The CAISO may exercise its authority to designate RA Maintenance Outage Backstop Capacity under this Section 43.10.1 to ensure that sufficient Resource Adequacy Capacity is operationally available to meet the CAISO system RA Reliability Margin. The CAISO shall endeavor to finalize the designation at least one day in advance of the start of the resource adequacy month.

43.10.2 Selection of RA Maintenance Outage Backstop Capacity

In accordance with Good Utility Practice, the CAISO shall make designations of RA Maintenance Outage Backstop Capacity from operationally available capacity, excluding the capacity of Generating Units, System Units, System Resources, or Participating Load that is already designated as a Resource Adequacy Resource, under an RMR Contract, or designated as CPM

Capacity during the replacement period, and excluding a Participating Generator or Participating Load that has filed notice to terminate its Participating Generator Agreement, QF PGA, Pseudo-Tie Participating Generator Agreement, or Participating Load Agreement or withdraw the capacity from its Participating Generator Agreement, QF PGA, Pseudo-Tie Participating Generator Agreement, or Participating Load Agreement. The CAISO shall select the RA Maintenance Outage Backstop Capacity by considering the following criteria in the order listed:

- (1) the availability of Non-Specified RA Capacity from other Load Serving Entities and the availability of capacity from other resources;
- (2) capacity that has similar operating characteristics to the capacity on outage;
- (3) the capacity costs associated with the available capacity; and
- (4) the quantity of a resource's available capacity, based on the resource's PMin, relative to the remaining amount of capacity needed.

The CAISO will apply the first criterion to identify the pool of available capacity for backstop from available Non-Specified RA Capacity that other Load Serving Entities have procured but did not designate as Resource Adequacy Capacity and the capacity available from other resources during the relevant resource adequacy month. The CAISO will apply the second criterion by endeavoring to select capacity that has similar operating characteristics to the capacity on outage. The CAISO will apply the third criterion by considering the cost of the available capacity, with the goal of selecting a lower cost resource. The CAISO will apply the fourth criterion by considering the quantity of a resource's available capacity. The CAISO will endeavor to select a resource that has a PMin at or below the needed amount of capacity before selecting a resource that has a PMin that would result in over-procurement. If after applying these criteria, two or more resources that are eligible for designation equally satisfy these criteria, the CAISO shall utilize a random selection method to determine the designation between those resources. The CAISO will notify the unit that has been selected and confirm that it accepts the designation as RA Maintenance Outage Backstop Capacity. The CAISO shall not designate the capacity of a resource for an amount of capacity that is less than the resource's PMin.

43.10.3 Term

RA Maintenance Outage Backstop Capacity designated under Section 43.10.1 shall have a minimum commitment of one day and a maximum commitment of 31 days. The term of the designation shall not extend into the subsequent resource adequacy compliance month. If the replacement period may continue into the following resource adequacy compliance month, the CAISO will consider the need to procure RA Maintenance Outage Backstop Capacity for that portion of the replacement period as part of the CAISO's validation of the Load Serving Entity's Resource Adequacy Plan for the next month pursuant to Section 40.2.2.4 or 40.2.3.4.

43.10.4 Obligation To Provide Capacity and Termination

The decision to accept a designation as RA Maintenance Outage Backstop Capacity shall be voluntary for the Scheduling Coordinator for any resource. If the Scheduling Coordinator for a resource accepts the designation, it shall be obligated to perform for the full quantity and full period of the designation with respect to the amount of RA Maintenance Outage Backstop Capacity for which it has accepted the designation.

43.10.5 Availability Obligations

Capacity from resources designated as RA Maintenance Outage Backstop Capacity 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 designation period, which includes the day of the start date and the day of the end date of the outage. If the CAISO has not received an Economic Bid or a Self-Schedule for RA Maintenance Outage Backstop Capacity, the CAISO shall utilize a Generated Bid in accordance with the procedures specified in Section 40.6.8.

43.10.6 Payment

Payment shall be made to the Scheduling Coordinator for the resource that received the designation to provide RA Maintenance Outage Backstop Capacity or to the Scheduling Coordinator for the Load Serving Entity that offered the Non-Specified RA Capacity procured as

RA Maintenance Outage Backstop Capacity. The payment shall equal the product of the number of days the resource provides RA Maintenance Outage Backstop Capacity multiplied by the MW amount of RA Maintenance Outage Backstop Capacity provided net of any Maintenance Outages or Forced Outages, multiplied by the fixed CPM Capacity price, on a pro rata daily basis, in effect pursuant to Section 43.7.1.

43.10.7 Allocation of Payment Costs

The cost of the payments made for an RA Maintenance Outage Backstop Capacity designation will be allocated to the Scheduling Coordinator for the Load Serving Entity whose monthly Resource Adequacy Plan fails to have sufficient operationally available Resource Adequacy Capacity, and RA Replacement Capacity if required by the ISO, to comply with the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. Such costs will be assigned in proportion to the MW amount of RA Maintenance Outage Backstop Capacity attributable to the individual Load Serving Entity.

43.10.8 Notice of Designation

The CAISO shall issue a Market Notice within five Business Days of an RA Maintenance Outage Backstop Capacity designation. The Market Notice shall include a description of the cause of the designation, the name of the resource(s) procured, and the term and MW amount of the designation. At the end of each resource adequacy month, the CAISO will provide to each Load Serving Entity that is allocated payment costs under Section 43.10.7 notice of the identity of the RA Resource that required backstop procurement and the identity of the RA Resource that provided the RA Maintenance Outage Backstop Capacity.

Attachment B – Marked Tariff

Replacement Requirement for RA Maintenance Outages Amendment Filing

California Independent System Operator

Fifth Replacement FERC Electric Tariff

September 20, 2012

Appendix A

Master Definition Supplement

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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.

* * * *

Off-Peak Opportunity RA Maintenance Outage – A Maintenance Outage for a Resource Adequacy Resource that is approved by the CAISO Outage Coordination Office to be initiated and completed during off-peak hours (as specified in the Business Practice Manual) without RA Replacement Capacity.

* * * *

RA Maintenance Outage Backstop Capacity –RA Maintenance Outage Backstop Capacity procured under Section 43.10.

RA Maintenance Outage With Replacement – A Maintenance Outage, or change to an Approved Maintenance Outage, that the CAISO Outage Coordination Office receives after the due date for the Resource Adequacy Plans and Supply Plans for the resource adequacy month and that includes RA Replacement Capacity.

RA Reliability Margin – The CAISO system forecast monthly peak Demand, plus a reserve margin of 15 percent of the forecast monthly peak Demand, based on the forecast prepared by the California Energy Commission.

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.

* * * *

Short-Notice Opportunity RA Maintenance Outage – A Maintenance Outage, or change to an Approved Maintenance Outage, for a Resource Adequacy Resource that does not qualify as an RA Maintenance Outage With Replacement or Off-Peak Opportunity RA Maintenance Outage, but that the CAISO Outage Coordination Office can accommodate on short notice without RA Replacement Capacity.

* * * *

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.

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9. Outages

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9.3 Coordination Of Outages And Maintenance

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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 Outage Coordination Office may take into consideration the status of a Generating Unit as a Resource Adequacy Resource. The CAISO Outage Coordination Office 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 ISO 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 in advance of the resource adequacy month but does not receive approval or denial of the request by the CAISO Outage Coordination Office as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO Outage Coordination Office, 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. Notwithstanding this provision, for the resource adequacy month of January 2013, if a Resource Adequacy Resource requested a planned Maintenance Outage, or change to an Approved Maintenance Outage, more

than forty-two days in advance of the resource adequacy month but does not receive approval or denial of the request by the CAISO Outage Coordination Office as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO Outage Coordination Office, 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 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 Manual, 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 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 RA Maintenance Outage Backstop Capacity pursuant to Section 43.10; and
- (d) Be submitted in the format required by the Business Practice Manual.

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 their 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 in Section 43.10 to procure RA Maintenance Outage Backstop Capacity.

9.3.1.3.3 Replacement Requirement for RA Resources

9.3.1.3.3.1 RA Maintenance Outage Requests With Replacement

After the monthly Supply Plan has been submitted, the Operator 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. A request for an RA Maintenance Outage With Replacement must (i) be submitted to the CAISO Outage Coordination Office at least three Business 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. The CAISO Outage Coordination Office will consider requests for an RA Maintenance Outage With Replacement in the order the requests are received. The CAISO Outage Coordination Office may approve the request if the outage includes the required RA Replacement Capacity and meets the criteria set forth in this Section 9.3.1.3.3.1 and Section 9.3.6.4.1. The RA Replacement Capacity for an RA Maintenance Outage With Replacement 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. The CAISO Outage Coordination Office may deny a request for an RA Maintenance Outage With Replacement that is not timely submitted and/or does not provide the required RA Replacement Capacity for the outage, or may treat it as a request for a Short-Notice Opportunity RA Maintenance Outage under Section 9.3.1.3.3.3.

9.3.1.3.3.2 Off-Peak Opportunity RA Maintenance Outages

The Operator of a resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage from ten days prior to the start of month until three business days prior to the end of the month, without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage. A request for an Off-Peak Opportunity RA Maintenance Outage must (i) be submitted to the CAISO Outage Coordination Office at least three Business 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 Manual) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manual) 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. The CAISO Outage Coordination Office will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received. The CAISO Outage Coordination Office may approve the request if (i) 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 (ii) it otherwise meets the criteria set forth in Section 9. 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 portion of the outage that extends into on-peak hours will be treated as a Forced Outage.

9.3.1.3.3.3 Short-Notice Opportunity RA Maintenance Outages

After the due date for the monthly Resource Adequacy Plans and Supply Plans and until the end of the resource adequacy month, the Operator of a resource designated as Resource Adequacy Capacity during the month may submit a request for a planned Maintenance Outage or a request to change an Approved Maintenance Outage that is not timely under the provisions of Section 9 and/or does not provide replacement capacity. The CAISO Outage Coordination Office may, at its discretion, deny the request, or approve the request as a Short-Notice Opportunity RA Maintenance Outage; provided that the CAISO Outage Coordination Office has adequate time to analyze the request before the outage begins and the analysis determines that (i) 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 (ii) the outage has not already commenced as a Forced Outage. The CAISO Outage Coordination Office will consider Short-Notice Opportunity RA Maintenance Outages in the order the requests are received. To the extent that an approved Short-Notice Opportunity RA Maintenance Outage is not completed during the originally approved outage schedule, the portion of the outage that continues from the approved completion time until the time the outage is actually completed will be treated as a Forced Outage.

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. Resource Adequacy Demonstration for All SCs In The CAISO BAA

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40.2.1.1 Requirements for CPUC Load Serving Entities Electing Reserve Sharing LSE Status

- (a) The Scheduling Coordinator for a CPUC Load Serving Entity electing Reserve Sharing LSE status 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.
- (f) Notwithstanding Section 40.2.1.1(a) and (e), for the resource adequacy month of January 2013, 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 later than November 20, 2012, which is 42 days in advance of the first day of the month.

* * * *

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) electing Reserve Sharing LSE status must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity, ~~on a schedule and in the reporting format(s) set forth in the Business Practice Manual. 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 ~~should~~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.

(f) Notwithstanding Section 40.2.2.4(b), for the resource adequacy month of January 2013, 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 later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.2.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the Load Serving Entity may submit at any time from 42 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.

* * * *

40.2.3.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide annual and monthly Resource Adequacy Plans, ~~on a schedule and in the reporting format(s) set forth in the Business Practice Manual,~~ for each Modified Reserve Sharing LSE served by the Scheduling Coordinator, 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 Modified Reserve Sharing LSE 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 the resources the Modified Reserve Sharing LSE will rely upon to satisfy its forecasted monthly Demand and Reserve Margin as set forth in Section 40.2.3.1, for the relevant reporting period and 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 Resource Adequacy Capacity required to be included in the Load Serving Entity's monthly 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.

(f) Notwithstanding Section 40.2.3.4(b), for the resource adequacy month of January 2013, 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 later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.3.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the Load Serving Entity may submit at any time from 42 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.

* * * *

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~~ing~~ their agreement to provide Resource Adequacy Capacity during the next Resource Adequacy Compliance Year ~~or relevant month, as applicable.~~
- (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 RA Maintenance Outage Backstop Capacity pursuant to Section 43.10, 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.

(e) Notwithstanding Section 40.4.7.1(b), for the resource adequacy month of January 2013, the monthly Supply Plans or the same information as required to be included in the monthly Supply Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no later than November 20, 2012, which is 42 days in advance of the first day of the month. Notwithstanding Section 40.2.2.4(c), for the resource adequacy month of January 2013, the Scheduling Coordinator for the resource adequacy resource may submit at any time from 42 days through 11 days in advance of the relevant month, a revision to its monthly Supply Plan to correct an error in the plan.

* * * *

40.4.7.3 Validation of Supply Plans

The CAISO shall be entitled to take reasonable measures to validate the accuracy of the information submitted in Supply Plans under this Section. Supply Plan validation measures may include the following:

- (a) The CAISO may compare a Resource Adequacy Resource's Resource Adequacy Capacity against the Resource Adequacy Resource's Net Qualifying Capacity, if applicable. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is

greater than the Resource Adequacy Resource's Net Qualifying Capacity, the CAISO will notify the respective Scheduling Coordinators for the Resource Adequacy Resource and each Load Serving Entity that has included the Resource Adequacy Resource in its Resource Adequacy Plan that the Resource Adequacy Capacity from the Resource Adequacy Resource shall be reduced to the Resource Adequacy Resource's Net Qualifying Capacity and that it will be considered a mismatch under Section 40.7. If the CAISO is not advised as to how the reduction in Resource Adequacy Capacity to conform with the Resource Adequacy Resource's Net Qualifying Capacity shall be allocated among each Load Serving Entity that included the Resource Adequacy Resource on its Resource Adequacy Plan, the CAISO will apply a pro rata reduction based on the Supply Plan.

(b) The CAISO may verify whether the Resource Adequacy Capacity listed in the monthly Supply Plan is scheduled to take an Approved Maintenance Outage during the month. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is greater than the Resource Adequacy Capacity designated for the resource in the Resource Adequacy Plan, or includes Resource Adequacy Capacity that is scheduled to take an Approved Maintenance Outage during the month, the CAISO will notify the Scheduling Coordinator for the Resource Adequacy Resource, and the respective Scheduling Coordinators for each Load Serving Entity that has included the Resource Adequacy Resource in its Resource Adequacy Plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is less than the Resource Adequacy Capacity designated for the resource in the

Resource Adequacy Plan, or includes Resource Adequacy Capacity that is scheduled for an Approved Maintenance Outage during the month, the CAISO will notify the Local Regulatory Authority, the Scheduling Coordinator for the Resource Adequacy Resource, and the respective Scheduling Coordinators for each Load Serving Entity that has included the Resource Adequacy Resource in its Resource Adequacy Plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7.

- (b) Other errors or inaccuracies identified by the CAISO in a Supply Plan shall be treated as a mismatch under Section 40.7.

Disputes regarding the CAISO's determination of Net Qualifying Capacity shall be subject to Section 40.5.2. The provisions of this Section shall not affect a Resource Adequacy Resource's Net Qualifying Capacity posted by the CAISO under Section 40.5.2.

* * * *

40.6 Requirements For SCs And Resources For Reserve Sharing LSEs

This Section 40.6 does not apply to Resource Adequacy Resources of Load following MSSs and those entities that participate in the Modified Reserve Sharing LSE program under Section 40.5. Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity listed in the Scheduling Coordinator's monthly Supply Plans under Section 40.4.7 available to the CAISO each hour of each day of the reporting month in accordance with this Section 40.6 and Section 9.3.1.3.

* * * *

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 in Section 43.10, to procure RA Maintenance Outage Backstop Capacity.

(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 43.

* * * * *

40.7.2 Penalties For Non-Compliance

The failure of a Resource Adequacy Resource or Resource Adequacy Capacity to be available to the CAISO in accordance with the requirements of this Section 40 [or Section 9.3.1.3](#), and the failure to operate a Resource Adequacy Resource by placing it online or in a manner consistent with a submitted Bid or Generated Bid shall be subject to the applicable Sanctions set forth in Section 37.2.4. However, any failure of the Resource Adequacy Resource to satisfy any obligations prescribed under this Section 40 [or Section 9.3.1.3](#) during a Resource Adequacy Compliance Year for which Resource Adequacy Capacity has been committed to a Load Serving Entity shall not limit in any way, except as otherwise established under Section 40.4.5 or requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable, the ability of the Load Serving Entity to whom the Resource Adequacy Capacity has been committed to use such Resource Adequacy Capacity for purposes of satisfying the resource adequacy requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable. In addition, a Reserve Sharing LSE shall not be subject to any sanctions, penalties, or other compensatory obligations under this Section 40 on account of a Resource Adequacy Resource's satisfaction or failure to satisfy its obligations under this Section 40 [or Section 9.3.1.3](#).

* * * * *

43.

Capacity Backstop Procurement Mechanism

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43.10 RA Maintenance Outage Backstop Capacity Procurement

43.10.1 Designation

The CAISO shall have the authority to designate capacity in accordance with Section 43.10.2 to provide RA Maintenance Outage Backstop Capacity services on each day during the resource adequacy month where (i) the CAISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, (ii) the Load Serving Entity's monthly Resource Adequacy Plan includes Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, (iii) such unavailable capacity was not replaced with RA Replacement Capacity pursuant to Sections 9.3.1.3.1 or 9.3.1.3.2, and (iv) the Load Serving Entity's monthly Resource Adequacy Plan fails to demonstrate operationally available Resource Adequacy Capacity equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. However, the CAISO shall not designate RA Maintenance Outage Backstop Capacity under this Section 43.10.1 until after the Scheduling Coordinator for the Load Serving Entity and the Scheduling Coordinator for the Resource Adequacy Resource scheduled to take the Approved Maintenance Outage have the opportunity to cure the outage replacement requirement as set forth in Section 40.7. The CAISO may exercise its authority to designate RA Maintenance Outage Backstop Capacity under this Section 43.10.1 to ensure that sufficient Resource Adequacy Capacity is operationally available to meet the CAISO system RA Reliability Margin. The CAISO shall endeavor to finalize the designation at least one day in advance of the start of the resource adequacy month.

43.10.2 Selection of RA Maintenance Outage Backstop Capacity

In accordance with Good Utility Practice, the CAISO shall make designations of RA Maintenance Outage Backstop Capacity from operationally available capacity, excluding the capacity of Generating Units, System Units, System Resources, or Participating Load that is already designated as a Resource Adequacy Resource, under an RMR Contract, or designated as CPM

Capacity during the replacement period, and excluding a Participating Generator or Participating Load that has filed notice to terminate its Participating Generator Agreement, QF PGA, Pseudo-Tie Participating Generator Agreement, or Participating Load Agreement or withdraw the capacity from its Participating Generator Agreement, QF PGA, Pseudo-Tie Participating Generator Agreement, or Participating Load Agreement. The CAISO shall select the RA Maintenance Outage Backstop Capacity by considering the following criteria in the order listed:

- (1) the availability of Non-Specified RA Capacity from other Load Serving Entities and the availability of capacity from other resources;
- (2) capacity that has similar operating characteristics to the capacity on outage;
- (3) the capacity costs associated with the available capacity; and
- (4) the quantity of a resource's available capacity, based on the resource's PMin, relative to the remaining amount of capacity needed.

The CAISO will apply the first criterion to identify the pool of available capacity for backstop from available Non-Specified RA Capacity that other Load Serving Entities have procured but did not designate as Resource Adequacy Capacity and the capacity available from other resources during the relevant resource adequacy month. The CAISO will apply the second criterion by endeavoring to select capacity that has similar operating characteristics to the capacity on outage. The CAISO will apply the third criterion by considering the cost of the available capacity, with the goal of selecting a lower cost resource. The CAISO will apply the fourth criterion by considering the quantity of a resource's available capacity. The CAISO will endeavor to select a resource that has a PMin at or below the needed amount of capacity before selecting a resource that has a PMin that would result in over-procurement. If after applying these criteria, two or more resources that are eligible for designation equally satisfy these criteria, the CAISO shall utilize a random selection method to determine the designation between those resources. The CAISO will notify the unit that has been selected and confirm that it accepts the designation as RA Maintenance Outage Backstop Capacity. The CAISO shall not designate the capacity of a resource for an amount of capacity that is less than the resource's PMin.

43.10.3 Term

RA Maintenance Outage Backstop Capacity designated under Section 43.10.1 shall have a minimum commitment of one day and a maximum commitment of 31 days. The term of the designation shall not extend into the subsequent resource adequacy compliance month. If the replacement period may continue into the following resource adequacy compliance month, the CAISO will consider the need to procure RA Maintenance Outage Backstop Capacity for that portion of the replacement period as part of the CAISO's validation of the Load Serving Entity's Resource Adequacy Plan for the next month pursuant to Section 40.2.2.4 or 40.2.3.4.

43.10.4 Obligation To Provide Capacity and Termination

The decision to accept a designation as RA Maintenance Outage Backstop Capacity shall be voluntary for the Scheduling Coordinator for any resource. If the Scheduling Coordinator for a resource accepts the designation, it shall be obligated to perform for the full quantity and full period of the designation with respect to the amount of RA Maintenance Outage Backstop Capacity for which it has accepted the designation.

43.10.5 Availability Obligations

Capacity from resources designated as RA Maintenance Outage Backstop Capacity 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 designation period, which includes the day of the start date and the day of the end date of the outage. If the CAISO has not received an Economic Bid or a Self-Schedule for RA Maintenance Outage Backstop Capacity, the CAISO shall utilize a Generated Bid in accordance with the procedures specified in Section 40.6.8.

43.10.6 Payment

Payment shall be made to the Scheduling Coordinator for the resource that received the designation to provide RA Maintenance Outage Backstop Capacity or to the Scheduling Coordinator for the Load Serving Entity that offered the Non-Specified RA Capacity procured as RA Maintenance Outage Backstop Capacity. The payment shall equal the product of the number

of days the resource provides RA Maintenance Outage Backstop Capacity multiplied by the MW amount of RA Maintenance Outage Backstop Capacity provided net of any Maintenance Outages or Forced Outages, multiplied by the fixed CPM Capacity price, on a pro rata daily basis, in effect pursuant to Section 43.7.1.

43.10.7 Allocation of Payment Costs

The cost of the payments made for an RA Maintenance Outage Backstop Capacity designation will be allocated to the Scheduling Coordinator for the Load Serving Entity whose monthly Resource Adequacy Plan fails to have sufficient operationally available Resource Adequacy Capacity, and RA Replacement Capacity if required by the ISO, to comply with the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. Such costs will be assigned in proportion to the MW amount of RA Maintenance Outage Backstop Capacity attributable to the individual Load Serving Entity.

43.10.8 Notice of Designation

The CAISO shall issue a Market Notice within five Business Days of an RA Maintenance Outage Backstop Capacity designation. The Market Notice shall include a description of the cause of the designation, the name of the resource(s) procured, and the term and MW amount of the designation. At the end of each resource adequacy month, the CAISO will provide to each Load Serving Entity that is allocated payment costs under Section 43.10.7 notice of the identity of the RA Resource that required backstop procurement and the identity of the RA Resource that provided the RA Maintenance Outage Backstop Capacity.

Attachment C – ISO’s Draft Final Proposal
Replacement Requirement for RA Maintenance Outages Amendment Filing
California Independent System Operator
Fifth Replacement FERC Electric Tariff
September 20, 2012



California ISO
Shaping a Renewed Future

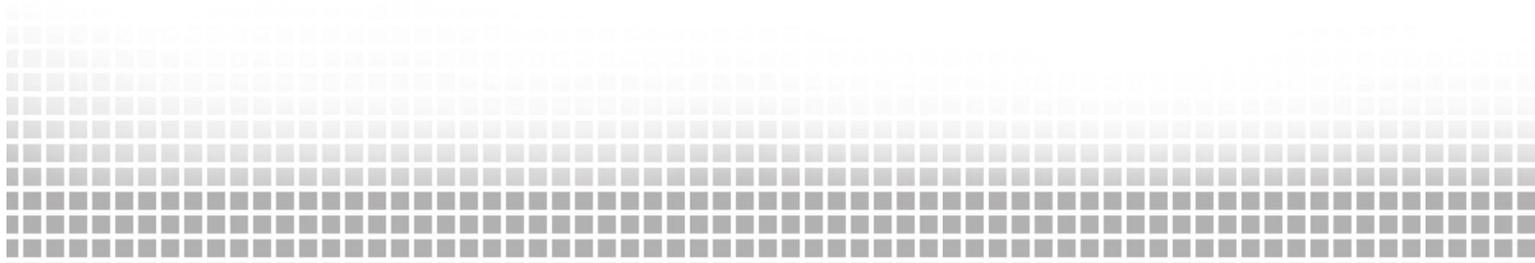
Replacement Requirement for Scheduled Generation Outages

Draft Final Proposal

May 17, 2012

Prepared by: Market and Infrastructure Policy

California Independent System Operator



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1.0 Introduction and Background

In D.11-06-022¹, the California Public Utilities Commission (CPUC) decided that, starting with the 2013 Resource Adequacy (RA) year, the CPUC would no longer apply a replacement rule requiring its jurisdictional load serving entities (LSEs) to provide replacement RA capacity under certain circumstances when RA resources were on planned outages. The ISO initiated this stakeholder process to develop changes to its outage management and resource adequacy procedures to address the elimination of the CPUC's RA replacement rule.

This Draft Final Proposal further builds on the Revised Straw Proposal that the ISO posted on April 18, 2012. It incorporates the discussion at the stakeholder web conference held on April 24, 2012, and comments received from stakeholders on the revised straw proposal.²

Resource Adequacy (RA) was instituted in California after the Energy Crisis to help ensure that sufficient resources would be available to meet the expected peak demand. Its structure requires a unique cooperation between the ISO and local regulatory authorities, including the California Public Utilities Commission. The program has changed since its inception, but the basics have so far remained unchanged: it is currently a one year forward and monthly demonstration that Load Serving Entities (LSEs) have sufficient capacity to meet their expected demand peak plus a planning reserve margin.

The RA program consists of an annual showing and monthly showings. The annual showing is submitted by LSEs in October for the following year. LSEs are required to meet two main requirements. First, they are required to show they have procured 90% of their need for the 5 summer months of the following year. Additionally, if their load is located in any of the Local Capacity Regions which the ISO has defined, they must demonstrate 100% of their need for local capacity for the entire year. The local capacity showings can also count towards the system level. The annual showing is preliminary and the LSEs can change their resources when they get to the monthly showings.

Currently, the ISO accepts or rejects each requested planned outage based on whether the outage presents a reliability risk when all possible generation that may avert that risk are considered. The ISO currently cannot reject planned outages or extensions to those outages by generators on the basis that they would reduce the level of RA generation below appropriate

¹ June 23, 2011; http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/138375.PDF

² In the previous proposal for this initiative (April 18, 2012 revised straw proposal), the ISO described stakeholder comments on the straw proposal, and the overall evolution of the proposal. The revised straw proposal is available at the following link:
[http://www.caiso.com/Documents/RevisedStrawProposal-
ReplacementRequirementScheduledGenerationOutages.pdf](http://www.caiso.com/Documents/RevisedStrawProposal-ReplacementRequirementScheduledGenerationOutages.pdf)

levels. The ISO cross-validates the supply plans of generators and the corresponding RA plans of LSEs, and provides this information to the CPUC along with information on planned outages. The CPUC determines if its jurisdictional entities are RA sufficient, and orders them to cure any deficiencies. Today, the cure of deficiencies includes requiring the LSEs to replace any RA capacity which is scheduled to be on a planned outage exceeding certain requirements. The CPUC has eliminated this LSE Replacement Rule starting with the 2013 RA year.

A continuing tenet of the RA program is that RA capacity is secured in the appropriate amount and location to support reliability. The amount, location and operational characteristics of RA capacity is expected to become even more important in the future as once-through cooling units retire and increased renewable generation (which are largely variable in output and virtually all outside of the Local Capacity Requirement area) reduces the energy revenue for conventional generation. With the elimination of the CPUC replacement rule to address planned outages, a change in the ISO's outage management process to consider RA reliability requirements is fundamental to maintaining the appropriate level of capacity.

In this draft final proposal, the ISO describes a new mechanism by which RA capacity will be replaced in order to maintain RA planning reserve margin levels of capacity. This will ensure that sufficient generation is with a must-offer obligation is available to facilitate reliable grid operation. Please note that the term "replacement" as used in the ISO's proposal is not meant to indicate these provisions are the same as those in the current CPUC replacement requirement.

2.0 Summary of Stakeholder Comments

In the formulation of this draft final proposal the ISO considered numerous comments from stakeholders. The proposal has been modified to address stakeholder comments, and this is discussed first. Next, the ISO provides clarification to address some stakeholder comments that appear to be based on misconceptions relative to the design of the ISO proposal. Finally, the ISO responds to stakeholder comments that did not result in changes to the Draft Final Proposal.

While a few stakeholders accepted advancing the monthly RA showings, the majority of stakeholders opposed moving the showing up to 90 days before the month. Parties gave numerous reasons for their opposition, including potential problems with contracting and determining the forecasts to be used for monthly showings. The CPUC comments also specifically opposed monthly showings at 90 days before the operating month, but also suggested that a 45 day time frame would afford both the ISO and CPUC the additional time needed to process RA showings. The CPUC went on to say "even if a compromise agreement of a 45 day timeframe is not a perfect fit for everyone, it would provide less disruption of other RA program processes while providing the CAISO with a bit more time to in [sic] manage outages." The ISO recognizes stakeholder opposition to advancing the monthly showings by 60 days. In

accordance with stakeholder feedback and especially in light of CPUC feedback, the proposal has been restructured to enable advancement of the showing by only 15 days (*i.e.*, to a total of 45 days prior to the operating month). Thus, the ISO proposes that the monthly RA showing and supply plans are now due to the ISO 45 days prior to the month.

The CPUC's comments indicated that when their Replacement Rule was eliminated, their expectation was that replacement capacity would be supplied by the generator. However, a suggestion in the comments of PG&E indicates that at least sometimes it would be more cost efficient for the LSE to provide replacement, since the capacity may already have been cost-effectively procured. The ISO has incorporated this idea into this Draft Final Proposal. LSEs will still be required to submit their RA showing of designated resources to meet 115% of their monthly peak, but the proposal now also encourages LSEs to voluntarily inform the ISO of other RA resources they have under contract, but which they do not wish to designate as RA for the month. Briefly, the ISO proposes that LSEs have the option to voluntarily submit a prioritized list of "non-designated" RA resources, which would not be subject to the SCP availability provisions or RA must-offer requirements. These "non-designated" RA resources would be available to provide substitute capacity for an LSE's RA resources that are unavailable due to a planned outage. Having these potential replacement resources will allow the ISO to quickly resolve any conflicts between the RA showings and any planned outages of RA capacity. When substituted for a resource that is unavailable due to an outage, the substitute replacement capacity would be subject to the RA rules (SCP and the must-offer requirement) throughout the period during which it was providing the substitute capacity.

Giving LSEs the option to provide not only their designated RA resources, but these extra non-designated RA resources provides a potential solution to concerns raised by several stakeholders that they were unable to procure replacement capacity because of the lack of a marketplace for capacity. In addition, in section 3.6 below the ISO proposes an option for LSEs to list on an ISO bulletin board any resources under RA contract but not included in the LSE RA showing that the LSE may be willing to sell to another LSE that does not have sufficient substitute capacity available to cover a planned outage.

Several parties expressed concern about the potential costs and issues which would result from having their approved planned outages cancelled close to the scheduled date for reliability reasons. The ISO is not proposing any changes to the provisions currently detailed in the ISO tariff and the Outage Management BPM with regard to the ISO cancelling planned outages as required by system conditions. A concern was raised that an RA generator may not know if its requested planned outage is approved until the monthly RA showings are made. This is true if the generator is an RA resource for the month and wishes to take the outage without providing replacement capacity. Nonetheless, the ISO maintains that it can't approve the planned RA outage without replacement until it can be certain that the outage won't reduce the system RA to less than 115% of the monthly peak.

There are options available to generators that can provide the generator with the advance approval they are seeking for when they can take their outage. They can either provide replacement RA capacity during the outage, or they can choose to not be an RA resource for the month when they wish to take the outage. In addition, the bulletin board proposal the ISO is including in this Draft Final Proposal should assist generators with finding replacement capacity to allow them to take planned outages when necessary.

The ISO is proposing that replacement capacity can be provided for only the period of the outage and is not be required for the entire month. This Draft Final Proposal recognizes that replacement capacity may only be needed for a few days, and not the entire month. This proposal is aimed at providing replacement capacity in a cost-effective and minimally burdensome manner. Stakeholders also requested that the ISO clarify the meaning of non-peak hours for the short term opportunity outages. Non-peak hours will be defined according to WECC rules except that Saturdays will also be considered non-peak. Stakeholders requested more details for how local RA resources will have their requests for planned outages approved. For local RA resources, the ISO clarifies that it will look at local reliability to approve the local RA planned outages, subject to the requirement that system RA must remain at 115% of the monthly peak.

There were several comments that there is no need for the ISO to do anything in response to the CPUC's elimination of its replacement rule. The ISO does not agree with this. RA is becoming more important as once through cooling units retire and other conventional units are expected to see their energy revenue reduced with the increase in renewable resources. It is fundamental to reliable grid operation that sufficient resources are available. Resources which are out of service due to planned or forced outages are not available to support grid reliability.

Other stakeholders suggest that the existing CPUC rule be continued. This is not something the ISO can do, and there appears to be minimal potential for this outcome. If parties desire to pursue this avenue further, they should engage the CPUC accordingly. Nevertheless, the ISO believes the current proposal is a superior alternative to the existing CPUC rule.

The ISO recognizes that there was general support for the proposal for short term maintenance outages and recognition of the challenges faced in coordinating outages for local RA resources. These elements have been included in this Final Draft Proposal.

3.0 ISO RA Outage Management Proposal

This proposal presumes that RA levels will be established as one of many aspects of reliability for the purposes of outage management. Separately or in combination with other reliability criteria, RA levels are a basis by which requests for planned outages may be approved or denied, and can be a determining factor in cancelling approved planned outages. In designing an RA outage management program, the desire of the ISO is not simply to replicate the existing CPUC Replacement Rule. While the existing rule does help ensure RA capacity is available, the current approach may fail to provide the ISO with the needed capacity for reliable operation of the grid and may create adverse incentives.³

The goal of the ISO in this RA Outage Management Proposal is to create a resource adequacy and outage management program that ensures sufficient capacity is available to reliably operate the grid and meet the load obligations of the LSEs while minimizing ISO procurement of capacity through its backstop mechanisms. The ISO's draft final proposal is outlined below, and is based on the premise that the ISO will manage outages to ensure the RA reliability requirements are maintained.

3.1 Replacement Requirement

Because RA is a measurement of reliability for the purpose of outage management, the ISO proposes that the RA levels not only be considered among the criteria used to approve or deny outage requests from RA resources, but also to cancel approved outages should the RA levels fall below appropriate amounts. Further, as a reliability factor, RA levels will be considered when determining the need to exceptionally dispatch resources (thus incurring CPM designation) as a backstop to RA resources procured through the RA program.

The ISO proposes that, up until the final showing of RA capacity, outages be managed so as to maintain each LSE's System RA level at the 115% requirement. This Draft Final Proposal therefore incorporates this opportunity for LSEs and generators to work together to provide replacement capacity in the most efficient method possible so that resource adequacy means exactly that. If the LSEs and/or generators fail to provide needed replacement capacity, the ISO will procure that capacity to ensure that the 115% planning reserve margin for the month is met, and allocate the costs to the LSE. Allocating the costs of this replacement capacity procured in the month-ahead time frame to the LSE creates the incentives for the LSE to both to work with the generators on outage scheduling and to provide its "non-designated RA" as possible replacement capacity.

³ For a more detail description of these issues please see the initial ISO Straw Proposal, available at: <http://www.caiso.com/Documents/StrawProposal-ReplacementRequirement-ScheduledGenerationOutagesMar6-2012.pdf>

The ISO recognizes both the importance of generation being able to take planned outages and the challenges facing units designated as local RA resources in combination with annual RA requirements. Therefore, with regard to outage management purposes, the ISO will primarily consider non-RA reliability measures in the local RA, as long as the system RA remains at or above 115%. This is consistent with how local RA outages are currently approved.

As in current practice, all approvals for planned outages are subject to change due to changes in systems conditions that may occur as a result of unanticipated events (including forced outages, forecast error, significant events, unanticipated events, etc.) The ISO has the responsibility to maintain grid reliability, which may from time to time adversely affect planned outages. Existing provisions regarding compensation for cancelled planned outages will remain unchanged.

Requests for planned transmission outages will similarly be evaluated in combination with generation outages with consideration of RA capacity levels.

3.2 Timing of monthly RA showings

The ISO proposes to extend the RA showing from the current timing of 30 days prior to the start of the operating month to 45 days prior to the start of the operating month. This change is consistent with the change the CPUC recommended in its comments on the ISO revised straw proposal. The ISO concurs with the CPUC that the 45-day timeline provides for “less disruption of other RA program processes while providing the CAISO with a bit more time to manage outages.”⁴ Supply plans will also be due 45 days before the month.

Please see the details on the proposed timeline in the next section of the paper.

3.3 Short-term opportunity outages

The ISO proposes to allow for short-term opportunity (STO) outages. Short-term opportunity outages may be requested after 10 days before the operating month and throughout the operating month (following the same principles as per the Outage Management BPM for planned outages) and will not be considered forced outages provided the following criteria are met:

- The outage is requested prior to 72 hours from the start of the requested outage period.
- The outage is fewer than 12 hours.
- The outage is during non-peak hours. The ISO proposes that “non-peak” for the purpose of these short-term opportunity outages be consistent with the WECC

⁴ [http://www.caiso.com/Documents/CPUC_Comments-
ReplacementRequirementForScheduledGenerationOutagesSRevisedStrawProposal.pdf](http://www.caiso.com/Documents/CPUC_Comments-ReplacementRequirementForScheduledGenerationOutagesSRevisedStrawProposal.pdf)

definition of non-peak except that non-peak also include weekends and holidays (as defined by WECC)

- The outage is allowable based on system conditions and enables the ISO to maintain established reliability criteria.

Extensions of the outage will not be allowed on a planned basis. If an outage requested through the short-term process extends beyond the time approved by the ISO, the outage would then be deemed a forced outage and subject to SCP availability charges.

Short term opportunity outages requested after the 72 hours prior to the requested outage period may seek a forced outage waiver which the ISO will grant based on the following criteria:

- The outage is fewer than 12 hours.
- The outage is during non-peak hours (as defined above).
- The outage is allowable based on system conditions and enables the ISO to maintain established reliability criteria.

3.4 Option to specify “non-designated” RA capacity

The ISO proposes that LSEs have the option to provide “non-designated RA” capacity in ranked order of the LSE’s preference to be used to substitute for an RA resource with scheduled planned outages that requires replacement RA capacity. Non-designated RA capacity on the supply plan will not be subject to SCP provisions nor will they have a must-offer obligation unless they are used to substitute for designated RA capacity. Having these potential replacement resources will allow the ISO to quickly process any planned outages in the RA showings. When substituted for a resource that is unavailable due to an outage, the substitute replacement capacity would then be deemed as designated and be subject to the RA rules (SCP and the must-offer requirement) throughout the period during which it was providing the substitute capacity.

3.5 Short-term Replacement RA Capacity

The ISO proposes to provide in its tariff a provision to allow the ISO to procure, in the month ahead time frame, short-term replacement RA capacity for circumstances in which RA levels for the month are less than the established requirements, and for which replacement RA capacity has not been otherwise arranged as per the timeline described in section 4 below. The costs of this Short-term Replacement RA Capacity would be allocated the LSE which had counted the RA capacity which has requested a planned outage.

LSEs which include “non-designated RA” in their RA showings would indicate their willingness sell that capacity to the ISO at the rate for Short-term Replacement RA Capacity for another LSE’s RA capacity. If the ISO uses that capacity to fulfill another LSE’s 115% RA level, the Short-term Replacement RA Capacity program will provide a capacity payment to the LSE

supplying capacity used by the ISO. The cost of the short-term replacement capacity will be allocated to the LSE for which the short-term capacity was procured.

The ISO proposes that the capacity payment to the short-term replacement RA capacity be equal to the *pro rata* (daily) of CPM payment multiplied by the number of days the resource provides replacement capacity. During the period the resource is providing replacement capacity it would be subject to all RA conditions, including the must-offer obligation and SCP Availability penalties.

3.6 Substitute capacity bulletin board

The ISO proposes to establish an electronic “bulletin board” as a forum through which market participants can make arrangements for replacement RA capacity as needed. The bulletin board would only list available capacity – any agreement to procure the capacity for replacement would be the responsibility of the parties. The entities which have negotiated for substitute capacity would then communicate the information regarding the substitute capacity to the ISO as is the practice today.

In addition to being able to participate in the Short-term Replacement RA Capacity program, those LSEs who submit “non-designated RA” can agree to be listed on a bulletin board of potential replacement RA capacity resources.

Parties agreeing to provide such capacity would be willing to sell this capacity to accommodate requests to provide replacement RA capacity from 1 day to 31 days during the month.

3.7 Flexibility requirements for RA

The CPUC RA decision for 2013 will determine which of the ISO’s proposed Flexibility Requirements will be included as part of the total RA reliability requirements for the 2013 RA year. The ISO envisions that approval of planned outages would be based on meeting and maintaining the Flexibility Requirements. For 2013, the ISO has requested that the CPUC approve the Flexible Capacity categories in its proposal and adopt only targets for flexible requirements which are not procurement requirements. The ISO is proposing that actual procurement requirements be adopted for 2014. Thus, for the RA Outage Management the inclusion of the flexible requirements in the RA Outage Management process will also be implemented for 2014. This will provide time for all parties to become familiar with both the RA Outage Management Process and the RA Flexible Requirements. More information on how the Flexible Capacity requirements will be calculated and measured can be found in the ISO documents in the CPUC’s 2013 RA proceeding and in the ISO’s Flexible Capacity Procurement Stakeholder Process.

4.0 Proposed Time Line for Resource Adequacy Outage Management

4.1 Requests for Planned Outages submitted *before* the monthly RA showings

Generators submit requests for planned outages as described in the ISO Tariff and Outage Management BPM. The ISO proposes to continue to approve planned outages on a first-come-first-served basis.

45 days prior to the operating month (t-45) – Monthly RA Showing and Supply Plans

- As described above, the ISO proposes that monthly RA showing and Supply Plan submittal will be at 45 days before the operating month.
- The ISO will perform its cross validation of the RA showings and supply plans, as well as check for planned outages of RA resources to assure reliable RA levels are maintained. As part of the cross-validation of supply and RA plan, the ISO will analyze the planned outages scheduled for RA resources. Outages which would result in an insufficient amount of RA capacity for the month will be indicated as needing RA Replacement capacity.
- If a system RA resource has a planned outage, and there is system RA capacity above 115% then the outage would not require RA replacement. The ISO will consider outage requests in first come first served order and will require RA replacement capacity for outages in reverse order received as needed to maintain reliability criteria and RA margins.
 - Planned outages for System RA units may require RA replacement capacity as necessary to assure that system RA resources are greater than 115% forecast system load. The ISO proposes that planned outages for System RA resources be required to provide RA replacement reserves in reverse order received according to the Outage Management BPM. Further, the System RA resource requesting an outage can exempt the outage from the RA aspects of outage management by assuring that substitute capacity is provided. If they don't provide replacement capacity when requesting the planned outage, they can take the chance there will be enough RA capacity that their outage will not reduce system RA to less than 115% of monthly peak after the monthly showing, which would require RA replacement capacity for the outage. In other words, for non-RA units and RA units with replacement, the ISO proposes to approve/deny the outage, subject to forecast grid conditions as is the current practice. This replacement can be accomplished as is done under current SCP practice, or through the automatic replacement with "non-designated RA" as described above.

- After the monthly RA showings, if the System RA capacity is less than 115%, the ISO will determine which RA plans include RA units which have scheduled outages which require RA replacement capacity and which have not provided the replacement capacity. If the plans fail to provide replacement capacity by the final date of 10 days before the month, the ISO will procure Short-term RA Replacement Capacity and charge the LSE.
- For RA units, for which there is no substitute RA capacity identified by seven (7) days prior to the start of the operating month, the outage will be considered a forced outage for the purpose of SCP provisions. This provides an incentive for the resource owner to work with the LSE to coordinate RA supply and outage planning in advance of the outage month, or to be prepared to provide substitute capacity or to accept and manage the risk of potential cancellation/rescheduling of their outage.
- After the monthly RA showings, RA suppliers may request planned outages only under the following two scenarios:
 - Outage with replacement: these outages will be approved using system reliability considerations, and will be exempt the outage from RA considerations since RA capacity is provided.
 - Short-term opportunity outages as described above in element 3 of the ISO's proposal.

25 days prior to the operating month (t-25)

- The ISO will notify the CPUC if there are inconsistencies between RA supply plans and RA showings.
- The ISO will inform suppliers and LSEs about which outages require RA Replacement capacity. A generator and/or LSE will have an opportunity to provide substitute capacity for any affected RA resource. If an "automatic" replacement has occurred as described above, the ISO will inform the LSE and the supplier. Alternatively, a supplier can provide the ISO with a notice that the generator is withdrawing the outage request.

10 days prior to the operating month (t-10)

- Final monthly RA showings must have reconciled any inconsistencies between the RA supply plan and the RA showing made at 45 days prior to the start of the operating month.
- Deadline for submission to the ISO of substitute capacity for planned outages. If replacement capacity has not been specified, the ISO will procure replacement capacity by way of the short-term RA replacement provision described in section 3.5.

- After this time, generators may request a short-term opportunity outage as described above. The short-term opportunity outage may be requested up until 72 hours prior to the requested outage period.

4.2 Requests for Planned outages received *after* the monthly RA showings

45 days before the month through the operating month (t-45 through t+30, for example)

- Requests for planned outages from non-RA resources will be treated exactly as today
- Requests for planned outages from RA resources received after the due date of the monthly RA showings:
 - Requests for planned outages from RA resources with substitute capacity will be evaluated primarily based on reliability measures other than the RA levels used in the showings of RA capacity procurement.
 - Short-term opportunity outages, and short-term opportunity outage forced outage waivers may be requested as described above in this proposal.

5.0 Next Steps

The ISO is proposing an aggressive schedule in order to allow us to file required tariff changes at FERC to be effective January 1, 2013.

Date	Event
April 18	Revised straw proposal posted
April 24	Stakeholder conference call
May 2	Comments due on revised straw proposal **
May 17	Draft final proposal posted
May 24	Stakeholder conference call
June 1, 2012	Comments due on the draft final proposal **
July 12-13, 2012	Board of Governors Meeting
August, 2012	FERC Filing
January 1, 2013	Implementation

** Please submit comments to OutageReplacement@caiso.com

Attachment D – Memorandum to ISO Board of Governors
Replacement Requirement for RA Maintenance Outages Amendment Filing
California Independent System Operator
Fifth Replacement FERC Electric Tariff
September 20, 2012

Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President of Market & Infrastructure Development

Date: July 5, 2012

Re: **Decision on Replacement Requirement for Scheduled Generation Outages**

This memorandum requires Board action.

EXECUTIVE SUMMARY

The resource adequacy program was instituted by the California Public Utilities Commission after the 2000-2001 energy crisis to ensure that sufficient generation was available to the ISO to reliably operate the grid. The program requires each load serving entity under CPUC jurisdiction to secure sufficient capacity to meet local and system load requirements. Historically, the resource adequacy program has included a “replacement rule” that requires each jurisdictional load serving entity to meet its resource adequacy requirement with designated generating resources that are available and not on an extended scheduled maintenance outage. However, in 2010 the CPUC issued an order finding that resource adequacy capacity replacement requirements should be developed and enforced by the ISO. As a result, starting in 2013 the CPUC will no longer enforce a replacement rule that requires its jurisdictional load serving entities to provide replacement resource adequacy capacity for capacity that is unavailable due to a planned maintenance outage.

Accordingly, Management has worked with stakeholders to develop a resource adequacy replacement rule to replace the expiring CPUC rule. The proposed rule is designed to ensure that the ISO has sufficient generation available to meet forecasted loads and to maintain grid reliability.

Management’s proposal includes the following six elements:

1. Planned outages for designated resource adequacy capacity will be managed according to the 115% planning reserve margin;
2. Monthly resource adequacy showings and supply plans will be submitted 45 days prior to the resource adequacy month;

3. A load serving entity can provide non-designated resource adequacy capacity to automatically substitute for one if its designated resource adequacy resources that goes on a planned outage;
4. Short-term replacement resource adequacy capacity may be designated by the ISO for the duration of an outage for which a designated resource adequacy resource does not have substitute capacity;
5. Generators designated as providing resource adequacy capacity may request short-term opportunity outages; and
6. An electronic bulletin board will be established to facilitate bilateral transacting of substitute resource adequacy capacity.

Management believes that this recommended suite of provisions will provide for market efficiency and fairness to both generation and load while preserving the resource adequacy program objective of ensuring the ISO has sufficient generation capacity to reliably operate the grid.

Moved, that the ISO Board of Governors approves the proposal for the ISO to adopt a replacement requirement for scheduled generation outages for resource adequacy resources, as described in the memorandum dated July 5, 2012; 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 proposal on January 1, 2013.

DISCUSSION AND ANALYSIS

Through this initiative, Management has worked with stakeholders to develop an outage management program for resource adequacy resources that ensures sufficient capacity is available to the ISO to reliably operate the grid. The proposal consists of six elements that are described more fully below.

Replacement requirement proposal

1. *Planned outages managed to maintain 115% planning reserve margin*

Management proposes that requests for planned outages for generators designated as supplying resource adequacy capacity be managed by the ISO according to the 115% planning reserve margin that is currently in effect. Once the resource adequacy showings have been provided, the ISO will reconcile the planned outage information received to date with the with resource adequacy showings and assess whether the 115% planning reserve margin has been met for the month. If the planned outages, assessed on a first come first served bases, result in insufficient resources to meet the 115% planning reserve requirement, the ISO will notify the load serving entities that are short of meeting the resource adequacy obligations. The short load serving entities will then have the opportunity to cure the shortage either by replacing a resource that has a

planned outage or by canceling the planned outage of a resource. Ten days prior to the start of the month the ISO will conduct a final assessment to ensure that the 115% reserve margin has been met. If the reserve margin has not been met, the ISO may procure additional capacity as short term replacement resource adequacy capacity, described below, and charge the short load serving entity for the cost of the capacity.

2. Require capacity showings 45 days prior to operating month

Under current rules, load serving entities are required to provide resource adequacy showings and supply plans to the ISO 30 days prior to the operating month. Management proposes moving this requirement up to 45 days prior to the operating month to allow time for the ISO to analyze the impact of proposed planned maintenance outages on the 115% planning reserve margin resource adequacy requirement.

3. Non-designated resource adequacy capacity

Because resource adequacy contracts between generators and load serving entities often extend over an entire year or block of months, on any particular month a load serving entity may have more contracted capacity than is needed to meet its monthly resource adequacy obligation and consequently will have to decide which resources to “designate” for meeting its monthly obligation. The proposal includes a provision to allow load serving entities to submit non-designated resource adequacy capacity that is in excess of the designated resource adequacy capacity shown to meet the 115% planning reserve margin requirement. A load serving entity’s non-designated capacity (in rank order of preference) would be automatically substituted if needed to fill in for a designated resource that goes on a planned outage. When substituted for a resource that is unavailable due to an outage, the substitute replacement capacity would then be deemed as designated and be subject to the resource adequacy rules (standard capacity product and the must-offer requirement) throughout the period during which it was providing the substitute capacity. Unless the non-designated resource is used for substitution, it will not be subject to resource adequacy provisions under the standard capacity product availability and must-offer requirements for resource adequacy resources tariff provisions.

This automatic use of a load serving entity’s non-designated capacity as replacement capacity will only be done during the initial resource adequacy analysis conducted after the monthly showings are provided to the ISO.

4. Short-term replacement resource adequacy capacity

Under Management’s proposal, the ISO may procure short-term replacement resource adequacy capacity prior to the operating month for the duration of an outage for which a designated resource adequacy resource does not have substitute capacity. The capacity will be procured for the duration of the outage. The cost of the short-term

replacement resource adequacy capacity would be allocated to the load serving entity that had not provided replacement capacity for its resource adequacy deficiencies.

Short-term replacement resource adequacy capacity will be selected under the ISO's established criteria for backstop procurement from a list of resources which have indicated a willingness to provide short-term replacement resource adequacy capacity. By indicating their willingness to provide short-term replacement resource adequacy capacity, these resources agree to provide the capacity for as little as one day and up to a full month.

Management proposes that the capacity payment to the short-term replacement resource adequacy capacity be equal to the *pro rata* (daily) capacity procurement mechanism payment multiplied by the number of days the resource provides replacement capacity. During the period the resource is providing replacement capacity it will be subject to all resource adequacy conditions, including the must-offer obligation and standard capacity product availability penalties.

5. Short-term opportunity outages

Management's proposal includes a provision for generators designated as providing resource adequacy capacity to request short-term opportunity outages 72 hours prior to the requested start time of the outage. Short-term opportunity outages may only be in off-peak hours, and may be granted only as system reliability permits.

6. Electronic bulletin board

Management proposes to establish an electronic "bulletin board" as a forum through which market participants can find replacement resource adequacy capacity as needed. The bulletin board will list capacity available to substitute for a designated resource adequacy resource that is unavailable due to an outage. Any agreement to procure the capacity listed on the bulletin board for replacement will be the responsibility of the parties. The entities which have negotiated for substitute capacity will then communicate the information regarding the substitute capacity to the ISO, as is the practice today. Any non-designated resource adequacy capacity under contract to a load serving entity or any generator without a resource adequacy contract can be listed on the bulletin board.

Local area considerations

The ISO recognizes both the importance of generation being able to take planned maintenance outages and the challenges facing units designated as local resource adequacy resources because of the annual resource adequacy requirements for local resource adequacy resources and limited local supply (if any) of substitutable non-resource adequacy capacity. Therefore, for outage management purposes, the ISO will primarily consider

non-resource adequacy reliability measures in the local resource adequacy area, as long as the system level resource adequacy remains at or above a 115% planning reserve margin. This is consistent with how local resource adequacy outages are currently approved, with the additional requirement that system resource adequacy levels be maintained at 115%.

Unapproved maintenance outages

A generator that takes an unapproved maintenance outage during the operating month will be subject to availability charges under the ISO's standard capacity product provisions. This provision, along with allocating to the load serving entity the costs of this replacement capacity procured in the month-ahead time frame, creates incentives for both the load serving entity and the generator to work together to ensure that there is replacement capacity for any resource adequacy generation scheduling an outage. This in turn will minimize the likelihood that the ISO will have to use its backstop authority to procure replacement capacity.

POSITIONS OF THE PARTIES

Stakeholders and the Market Surveillance Committee generally support the elements of the proposal. In particular, there is wide support for the short-term opportunity outages and the electronic bulletin board elements of Management's proposal.

Both Six Cities and GenOn expressed the preference that, rather than implementing the proposed replacement requirement, the ISO adopt the existing California Public Utility Commission rules. However, ISO Management recommends the proposed replacement requirement in order to ensure that sufficient resource adequacy capacity is available to operate the grid reliably, and to promote the efficiency with which that capacity is procured.

The Alliance for Retail Energy Markets and Pacific Gas and Electric underscored the importance of coordination with the CPUC and the California Energy Commission. ISO Management recognizes that some coordination with other entities involved with the resource adequacy program will be necessary, and is taking steps toward that end.

San Diego Gas and Electric contends that there is a potential for free-ridership for small load serving entities. It is possible that confirming system level resource adequacy capacity of 115% before evaluating the supply plans from individual load serving entities can, to a limited extent, have this result. However, this concern must be weighed against imposing excessive procurement costs or complicated cost allocation rules. Management's proposal to manage the system level of resource adequacy capacity to 115% ensures that excess resource adequacy capacity is not procured.

Several stakeholders have noted that there are remaining implementation issues that need to be addressed and that this proposal poses some difficulty in their resource adequacy contracting process. Management notes that the stakeholder policy initiative

has been expedited in order to provide as much certainty as possible around the replacement requirement for the 2013 resource adequacy contracting process. Management recognizes that there are outstanding implementation concerns and commits to addressing them.

More detailed information on stakeholder comments and ISO Management responses is provided in the attached stakeholder comments matrix.

CONCLUSION

With the elimination of the CPUC's Replacement Rule on January 1, 2013, it is necessary for the ISO to adopt replacement rules for resource adequacy resources in order to ensure that the resource adequacy program continues to provide the ISO with the resources necessary to reliably operate the grid. Management believes that this recommended suite of changes provides an efficient and fair mechanism for replacing resource adequacy capacity that is unavailable due to planned maintenance outages while preserving the resource adequacy program objective of ensuring the ISO has sufficient generation capacity to reliably operate the grid.