



Reliability Services Initiative – Phase 2: Second Revised Straw Proposal

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1. Executive summary

Reliability Services Initiative – Phase 2 (RSI2) focuses on a variety of issues that pertain to Resource Adequacy (RA) issues and processes not directly connected to the definition of the flexible capacity product, but which are necessary to effectively administer the RA program. Specifically, the ISO will cover seven issues in RSI2. These issues, along with a brief summary of the ISO’s proposals, include:

- 1) Clarify Local Regulatory Authority interaction and process alignment – The California ISO (ISO) proposes providing a standardized template to all LRAs to provide information about the Local Regulatory Authority’s (LRA) RA program needed for the ISO to validate a Load serving Entities’ (LSE) RA showing. This information includes, *inter alia*, the planning reserve margin and capacity credit structure. Additionally, the ISO will establish a deadline of 30 days prior to due date of annual RA showings to receive this data or the ISO will apply the default RA provisions that are in the ISO’s tariff.
- 2) Substitution for flexible capacity resources on planned outage – The ISO proposes substitution timelines for flexible capacity resources on planned outages similar to those proposed in the Reliability Services Initiative – Phase 1 (RSI1) stakeholder initiative for system and local RA resources. Further, the ISO proposes that this substitute capacity confirm, as part of the substitution, the resource is capable of meeting the must-offer obligation for the duration of the resource outage. This is comparable to the requirement for flexible capacity on forced outages established in RSI1.
- 3) Separate local and system RA for purpose of forced outage substitution – The ISO reviewed the local capacity requirements study methodology to determine if it is possible to allow resources in a local capacity area procured for system capacity under an LRA’s RA program to substitute that capacity with system RA capacity. The ISO proposes to allow resources in a local area procured for system RA that go on forced outage to be substituted with another system resource. If any portion of a resource designated as a local resource, it would have to replace all capacity on outage with another local resource to avoid RAAIM charges. The ISO may consider partial local RA resources as a further enhancement in a future initiative
- 4) Process to update EFC list during the year – The ISO provides greater clarity about how a Scheduling Coordinator (SC) may update a resource’s Effective Flexible Capacity (EFC) value after the ISO has published the final EFC listing for the upcoming year. Additionally, RSI 1 developed a “nature-of-work” outage card exempting use-limited resources from the ISO’s performance incentive mechanism, the RA Availability Incentive Mechanism (RAAIM), once the use limitation has been reached. Use-limited RA resources with an opportunity cost may expend their limitation(s) while still being shown on RA showings. To ensure sufficient capacity remains available to the ISO when use-limited RA resources are no longer available to the market, the ISO proposes not to

exempt use-limited resources from RAAIM with limitations that extend beyond the current month.

- 5) Masterfile changes and RAAIM availability – The ISO reviewed two changes to resource parameters that may impact a resource’s ability to provide EFC: changes that impact the quantity of EFC provided and changes that impact the category of flexible capacity for which it is eligible. The RAAIM mechanism is sufficient to address changes to the quantity of flexible capacity and no additional actions are required. However, changes that alter the flexible capacity category eligibility, like changes to the number of starts per day, require additional treatment under RAAIM. The ISO proposes that resources that no longer qualify for a category of flexible capacity be assessed as being unavailable under RAAIM.
- 6) Address the RAAIM exemption currently in place for combined flexible capacity resources – Currently, combination flexible capacity resources are exempt from RAAIM. The ISO proposes to eliminate this exemption. In order to apply RAAIM to combination flexible capacity resources, the ISO proposes to create a pseudo-resource for the two resources in the combination. This pseudo-resource is used only for purposes of calculating RAAIM charges or payments and has no other implications on the combination.
- 7) Streamlining monthly RA showings – LSEs are required to submit annual RA showings by October 31 and monthly RA showings 45 days prior to the operating month. The ISO is proposing to automatically roll LSEs’ RA showings from the annual showing into the monthly showings. If an LSE’s showing changes, the SC can submit new information into the monthly RA showings before 45 days prior to the operating month. If no action is taken by the LSE by 45 days prior to the operating month, the ISO will use the annual showing to for all RA assessments. Although the ISO proposes to automatically roll annual RA showings into monthly showing, the ISO does not propose to automatically roll resource supply plans into the monthly showings. As is currently allowed, SCs for RA resources may still enter supply plans at the same time that they are submitted in the year ahead showing.

The ISO is currently planning for a fall 2017 release to implement all aspects of RS12.

2. Changes to proposal and stakeholder comments

2.1 Changes to Proposal

The changes that the ISO has made to the proposal in response to stakeholder comments are summarized below. Additional discussion of these changes is provided in section 2.2, below.

1. Regarding LRA interaction and process alignment, the ISO has included the basic spreadsheet that LRAs would submit, with an example, and new default sheet, to clarify and simplify the ISO’s proposal.
2. Regarding substitution for flexible capacity resources on planned outage, the ISO has modified its proposal from the initial “category-or-better” proposal to a proposal that is

based on a confirmation that the substituting capacity can meet the must-offer obligation of the resource on outage for the duration of the outage.

3. Regarding separate local and system RA for purpose of forced outage substitution, the ISO provides additional clarity on the treatment of local resources for planned outages, and clarifies that resources can either be designated as local or system resources and resources cannot be designated as “partial” local resources. The ISO does not see a benefit from extending the proposed change to the planned outage substitution rules for RA resources located in a local area requesting a planned outage.
4. Regarding Masterfile changes and RAAIM availability, the ISO clarifies the connection between starts per day and other Masterfile parameters and clarifies that because a Masterfile change does not constitute an outage a resource will not have the ability to provide substitute capacity and will be subject to RAAIM for any unfulfilled capacity requirement.
5. Regarding the RAAIM exemption for combined flexible capacity resources, the ISO provides additional examples to clarify the ISO’s proposal.
6. Regarding streamlining the monthly RA showings, the ISO provides additional information regarding the implications for penalties associated with missing or late information and clarifies why it does not propose to allow supply plans to also roll through

2.2 Stakeholder Comments

In its August 19, 2015 straw proposal, the ISO requested stakeholder comments on each of the items identified above. While many stakeholder comments seek additional clarifications, others propose alternative options for the ISO to consider. The following summarizes stakeholder comments on each topic and the ISO’s response.

Stakeholder comments on the revised straw proposal were generally supportive of the ISO’s proposed changes with regards to EFC updates and streamlining monthly RA showings. However, some stakeholders oppose aspects of the ISO’s proposal on forced outage substitution, while others seek additional detail about the ISO’s local capacity forced outage substitution or the application of RAAIM to the combination flexible capacity resources. Also, there were additional comments made on other topics. A matrix of stakeholder comments and the ISO’s responses is included in Appendix A. The following provides an overview of these items and the ISO’s responses.

- (1) Clarify Local Regulatory Authority interaction and process alignment – PG&E and SDG&E support increased alignment between the CPUC and the ISO, though SDG&E questions the need for such alignment discussions, especially because much of the details outlined are BPM changes. While most of the changes proposed here will reside in the ISO’s BPMs, there will likely be tariff changes that refer to the processes and dates

established in the BPMs. Further, the ISO has started BPM discussions as part of the policy development in the past to help accelerate the BPM change process. CDWR suggests that some of the items sought require more detail than the ISO is requesting and should allow for more than yes-no answers. The ISO is only looking to collect basic information from LRAs to set up various ISO systems and yes-no answers are sufficient to do so. The CPUC staff opposes the ISO placing any requirements that would constrain the CPUC's ability to administer its RA program. The ISO does not believe the processes proposed will in any way constrain any LRA's ability to administer its RA program. In an effort to clarify and simplify this aspect of the proposal, the ISO has included the basic spreadsheet, with an example, and new default sheet as part of Appendix B and C respectively. This is further discussed in Section 5.1.

- (2) Substitution for flexible capacity resources on planned outage – Six Cities argues that the ISO's proposal requiring "category-or-better" flexible capacity substitution is inconsistent with the direction provided in the ISO's RSI1 proposal. Further, SCE, CPUC, and SDG&E make arguments similar to those made by Six Cities (*i.e.*, that the substitute resource only should be required to meet the must-offer obligation of the resource going on outage). The ISO has modified its proposal from the initial "category-or-better" proposal to a proposal that is based on a confirmation that the substituting capacity can meet the must-offer obligation of the resource on outage for the duration of the outage. The ISO believes this allows for greater flexibility for providing substitute capacity for flexible capacity while maintaining the quality of capacity originally procured through the flexible capacity categories. The comments regarding this proposal are addressed in greater detail in section 5.2.
- (3) Separate local and system RA for purpose of forced outage substitution – Calpine, NRG, and Six Cities support the ISO's proposal and advocate for the ISO to expand the policy to planned outages as well. However, SDG&E raised concerns about the ISO's proposed language for planned outages. In this proposal, the ISO provides additional clarity on the treatment of local resources for planned outages. SCE and CDWR support the ISO's proposed treatment of forced outages, but requests additional details regarding the substitution obligation of resources that may have only be procured partially for local RA capacity. The CPUC, CDWR, and PG&E have expressed concerns regarding the potential complexity that the ISO's proposal may add to LSE's RA showings and have also requested additional information. The ISO has enhanced its proposal to clarify that resources are either local or system resources and that resources have the ability to submit themselves as partial local resources. The ISO may consider further changes as part of a future enhancement if additional granularity in local RA showings proves beneficial without over-complicating RA showings. The ISO does not see a benefit from extending the proposed change to the planned outage substitution rules for RA resources located in a local area requesting a planned outage as requested by Calpine. The ISO provides additional discussion in section 5.3.
- (4) Process to update EFC list during the year – CPUC and Six Cities support the ISO's proposal to allow resources to update their EFC during the year. SDG&E noted a

concern regarding impacts from Commitment Cost Enhancements Phase 3 (CCE3) if the ISO seeks to define use-limited capacity rather than use-limited resource. The ISO is proposing in CCE3 to define use-limited resource, therefore SDG&E's concern is negated. All of these comments are addressed in greater detail in section 0.

- (5) Masterfile changes and RAAIM availability – SDG&E and WPTF seek additional clarity about how the ISO will determine resource qualification for categories of flexible capacity when they change Masterfile parameters. Specifically, both SDG&E and WPTF both refer to the number of starts per day and the connection with flexible capacity category qualification. Although the ISO is not proposing any changes to the parameters established based on the policy that was developed in the Flexible Resource Adequacy Criteria and Must Offer Obligation (FRACMOO) and approved by FERC, the ISO has clarified the connection between starts per day and other Masterfile parameters. Further, SDG&E and CDWR also ask about opportunities for providing substitute capacity. The ISO has clarified that because a Masterfile change does not constitute an outage, a resource would not have the ability to provide substitute capacity and be subject to RAAIM for any unfulfilled capacity requirements. Additional discussion is provided in section 0.
- (6) Address the RAAIM exemption currently in place for combined flexible capacity resources – Six Cities generally supports the ISO's proposal, but has requested additional examples to help clarify the ISO's proposal. SDG&E argues that the ISO should assess the combination flexible capacity resources at the lower availability of the two resources. The ISO disagrees because such a measure does not reflect the resource's true availability. The CPUC generally supports the ISO's proposal. The ISO has provided additional detail to address Six Cities' request. Additional discussion of the proposal is provided in section 5.6.
- (7) Streamlining monthly RA showings – The Small POU Coalition asked that the ISO provide additional detail regarding the implications for penalties associated with missing or late information. The ISO provides clarity in section 5.7.
- (8) Other comments – Several stakeholders offered comments on matters not already addressed above or comments to the issue paper. These comments include the following:
 - a. The CPUC reiterates its desire for the ISO to consider seasonal local RA studies. As acknowledged in the CPUC staff comments, this matter is most appropriately addressed in the ISO's Local Capacity Requirements annual study process. The ISO looks forward to addressing additional CPUC staff concerns on this matter in that stakeholder process.

- b. The Small POU coalition requested a *de minimis* exception for procurement of flexible RA. While the ISO is willing to consider such an exemption, it is beyond the scope of RSI2. The ISO may address this issue in FRACMOO2.

3. Plan for Stakeholder engagement

The ISO is targeting March 2016 for ISO Board of Governors approval for this stakeholder initiative. The current schedule for RSI2 is shown below.

Date	Reliability Services Initiative – Phase 2
June 25, 2015	Issue paper posted
July 2, 2015	Stakeholder call on issue paper
July 10, 2015	Comments due on issue paper
August 19, 2015	Straw proposal posted
August 26, 2015	Stakeholder meeting on straw proposal
September 9, 2015	Comments due on straw proposal
October 7, 2015	Revised straw proposal posted
October 14, 2015	Stakeholder call on revised straw proposal
October 24, 2015	Comments due on revised straw proposal
November 13, 2015	Second revised straw proposal posted
November 20, 2015	Stakeholder call on second revised straw proposal
December 9, 2015	Comments due on second revised straw proposal
January 7, 2015	Draft final proposal posted
January 14, 2015	Stakeholder call on draft final proposal
January 22, 2015	Comments due on draft final proposal
March 24-25, 2016	Board of Governors

4. Background

The western energy landscape continues to evolve, presenting new challenges and opportunities such as (1) integrating more distributed energy resources, renewable resources, and innovative new technologies, (2) expanding the ISO's Energy Imbalance Market, and (3) increasing regional coordination. Passage of Clean Energy and Pollution Reduction Act of 2015 SB 350 and a 50 percent Renewable Portfolio Target illustrates that more changes are forthcoming. The ISO is tasked with maintaining grid reliability as the energy landscape changes. Although this new landscape holds the promise of a cleaner energy future, it also brings with it the challenge of maintaining reliability while managing a greater number of resources, a more diverse resource portfolio, and more variable loads and resources. If sufficient system, local, and flexible capacity are available to the ISO's day-ahead and real-time markets through forward procurement, then the ISO will have the tools necessary to make a cleaner and more reliable energy future a reality.

The RA framework was originally designed to ensure that the ISO has access to sufficient capacity to maintain grid reliability under peak load conditions each month. After this initial ground work was put in place, the RA framework was enhanced to include a locational component. Although ensuring local resource adequacy was not envisioned at the onset of the RA program, it was a reasonable and necessary evolution of the program to maintain reliability. Similarly, with the increased penetration of variable energy resources throughout California, the ISO identified a need to enhance the RA program to include physical attributes for flexible capacity to ensure the ability to maintain grid reliability under rapidly changing conditions. The ISO and CPUC took the initial steps to address flexible capacity needs in 2013 -14 in the ISO's Flexible Resource Adequacy Criteria and Must Offer Obligation (FRACMOO) stakeholder initiative¹ and the CPUC's RA proceeding.² Including local and flexible capacity in the RA program demonstrates that the program must consider more than just peak load, and in particular, must recognize and adapt to changing grid conditions that require specific attributes of RA capacity. In RSI1, the ISO continued enhancing the RA framework by reviewing existing tariff provisions as they pertained to resource outages and availability. Based on this review, the ISO developed the RA Availability Incentive Mechanism (RAAIM),³ a new availability incentive to substitute the existing Standard Capacity Product (SCP). RAAIM is a bid-based means for determining a resource's availability to the ISO, as opposed to the forced outage-based SCP tool. As part of RSI1, the ISO also redesigned the rules for replacement and

¹ <http://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleResourceAdequacyCriteria-MustOfferObligations.aspx>

² http://www.cpuc.ca.gov/PUC/energy/Procurement/RA/ra_history.htm

³ The ISO's tariff amendments based on the RSI1a filing at FERC were approved on October 1, 2015. FERC's ruling is available at <http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14002770>

substitution of resources that go on planned and forced outages, respectively.⁴ Although RSI1 made several improvements to the availability and outage substitution and replacement rules, there are additional opportunities for improvement.

The goal of the RSI2 initiative is to continue improving aspects of the ISO's availability, outage substitution and replacement rules, and clarifying the RA process. Specifically, the ISO looks to address the following seven elements of the RA program:

- 1) Develop a standardized reporting of RA requirements that an LRA and LSE can provide to the ISO detailing their specific RA program,
- 2) Develop planned outage substitute capacity rules for flexible capacity resources,
- 3) Assess the adequacy of existing planned and forced outage substitution rules for local capacity resources,
- 4) Establish a change management process for resources that require updated Effective Flexible Capacity (EFC) quantities,
- 5) Apply RAAIM charges to resources that change Masterfile parameters that change their ability to qualify for a flexible capacity category,⁵
- 6) Design the rules needed to apply the RAAIM to combination flexible capacity resources, and
- 7) Options to streamline the RA process and increase transparency and notification.

The ISO proposed a two phase process to address potential enhancements to the RA framework. In RSI1, the ISO undertook the initial effort to address the ISO's rules and processes surrounding RA resources. The primary enhancements adopted in RSI1 included:

- Default qualifying capacity rules for non-generator resources (NGR), distributed energy resources, and proxy demand resources
- The new RA Availability Incentive Mechanism (RAAIM) to ensure RA capacity is available to the ISO consistent with the specific category of RA capacity the resource is providing⁶
- Streamlined rules for planned and forced outage substitute capacity for system and local capacity and forced outage substitute capacity for flexible capacity resources.

The ISO originally intended that the scope of RSI2 include (1) developing a more durable flexible capacity product that built on the framework established the FRACMOO stakeholder initiative

⁴ The ISO will submit these tariff amendments to FERC as part of the RSI1b filing.

⁵ This element was originally under the heading of EFC change management, but the ISO has broken it out to provide greater clarity and detail.

⁶ As noted in the RSI1 Draft Final Proposal, the new RAAIM mechanism was designed to replace the existing Standard Capacity Product.

and (2) addressing other unresolved issues from the FRACMOO stakeholder initiative. The ISO has subsequently reviewed the outstanding issues from both RS11 and FRACMOO and divided them into two distinct categories. The first category of issues pertains to enhancements to the existing flexible capacity product. The ISO will consider these issues as part of the ISO’s FRACMOO2 stakeholder initiative.⁷ The second category of issues pertains to RA issues and processes not directly connected to the definition of the flexible capacity product, but which are necessary to effectively administer the RA program. RS12 will focus on these processes. Table 1 provides a list of specific topics that will be addressed in each stakeholder process.

Table 1: Issues identified in FRACMOO or RS11

Issues directly connected to the flexible capacity product definition and covered in FRACMOO2	Processes improvements necessary for administering the RA program and covered in RS12
Review the flexible product definition and develop any additional flexible capacity needs	Clarify Local Regulatory Authority interaction and process alignment
Provision of flexible capacity by inertie resources, including EFC calculation	Substitution for flexible capacity resources on planned outage
Flexible capacity from storage resources not using the NGR model	Separate local and system RA for purpose of forced outage substitution
Flexible capacity impacts of uncontracted/merchant VERs, for which no LSE has associated flexible capacity requirements	Process to update EFC list during the year
	Apply RAAIM charges to resources that change Masterfile parameters that change their ability to qualify for a flexible capacity category
	Address the RAAIM exemption currently in place for combined flexible capacity resources

⁷ Information on the FRACMOO2 stakeholder initiative can be found at <http://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleResourceAdequacyCriteria-MustOfferObligations.aspx>

	Options to streamline the RA process and increase transparency and notification
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5. Second Revised Straw Proposal

5.1 LRA and LSE interactions and process alignment

The ISO has identified certain RA tariff provisions that, if further clarified, will provide additional benefits to both LRAs and LSEs. This section will first define the standard components that the ISO needs to identify to determine whether an LSE is in compliance with the ISO’s RA tariff provisions, to determine overall net deficiencies, and determine proper cost allocation for any backstop procurement. Second, the ISO proposes a timeline that provides clear guidance for when the ISO will need to use its default tariff provisions in its determinations.

The ISO will clearly define the timelines and processes it will use when reviewing RA showings and RA plans. The goal is not to constrain any LRA from developing or implementing an RA program or bind an LRA.⁸ To the contrary, the goal is to provide LRAs and market participants clear guidance on when LRA RA requirements or ISO default RA tariff provisions apply and to provide clear documentation for necessary inputs to the ISO RA compliance evaluations. Currently, year ahead RA showings are due on October 31. As noted below, the ISO has modified the proposed timing by which it would need the information from the LRA to be relative to the date of the annual RA showings. Clearly defining and documenting these timelines and processes allows market participants to better understand their obligations under the ISO tariff and mitigate potential deficiencies.

ISO proposal for process alignment with LRAs

LRAs may have official RA program materials⁹ that outline the various facets of their RA programs. The ISO Tariff gives due weight to the LRAs’ in evaluating whether jurisdictional load serving entities meet Resource Adequacy compliance obligations. The ISO tariff requires the ISO to perform a compliance evaluation of LSE RA demonstrations.¹⁰ It also requires the ISO to use the LRA methodologies in determining overall net deficiencies in meeting the total monthly Demand and Reserve Margin requirements and in determining proper cost allocation for any backstop procurement.¹¹ For the ISO to effectively and efficiently (1) evaluate the LSEs’

⁸ This is a concern raised in the CPUC staff comments.

⁹ Official Resource Adequacy program material must be an official document that details the LRA’s RA program.

¹⁰ ISO Tariff Section 40.7, “Compliance”

¹¹ ISO Tariff Section 43.2.3, “SC Failure to Show Sufficient Resource Adequacy Resources”

compliance with the ISO Tariff by evaluating LSE demonstrations compared to applicable local regulatory authority RA requirements,¹² and (2) ensure proper cost allocation for any backstop procurement, it must receive a LRA's RA program information each year in a standard format. The ISO proposes to provide LRAs a standardized template that will specify the information needed regarding an LRA's RA program. This template will not change the provisions of an LRA's RA program, it will serve only to standardize the manner in which the information is provided to the ISO.

The ISO's evaluations of RA showings must be aligned with an LRA's methodology. However, without clear documentation about the LRA methodology this may not be possible, resulting in potential discrepancies between the ISO's and LRA's assessment of RA showings. Absent the information from the ISO's proposed template, the ISO will need to use its default information in fulfilling its obligations to perform an ISO tariff compliance evaluation, determine overall net deficiencies in meeting the total monthly Demand and Reserve Margin requirements, and in determining proper cost allocation for any backstop procurement.

Components of the template

The template specifies the information the ISO needs regarding the requirements of the LRA RA program to confirm the LSE's compliance with applicable LRA RA requirements. The LRA would provide the following information in the template for both their annual and monthly RA showing:

- 1) Annual/monthly planning reserve margin,
- 2) Annual/monthly evaluation of the requirements the LSE must show (percentage),
- 3) Annual/monthly individual peak demand & reserve margin requirement for each LSE,
- 4) Annual/monthly individual local capacity requirement for each LSE,
- 5) Annual/monthly individual local requirements if the LRA has a different local requirement allocation,
- 6) Annual/monthly individual flexible evaluation, and
- 7) Annual/monthly individual flexible requirements if an LSE has a different flexible requirement than the ISO.

The following components are for LRA RA programs that allow the use of credits to meet peak demand & reserve margin requirements in both an annual and monthly as well as a system and local evaluation.

- 1) Annual/monthly system/local demand response eligible,

¹² This evaluation is not a final determination of LSE compliance with their LRA; LRA compliance can only be determined by the LRA itself. This evaluation is a determination that the LSE is compliant with the ISO Tariff, that the LSE has shown sufficient RA capacity relative to the RA requirements provided to the ISO by the LRA

- 2) Annual/monthly system/local demand response adjustment,
- 3) Annual/monthly system/local reliability must run eligible,
- 4) Annual/monthly system/local cost allocation mechanism eligible,
- 5) Annual/monthly system/local liquidated damages eligible, and
- 6) Annual/monthly system/local other credit eligible.

The ISO will request these components through a standardized spreadsheet template to efficiently evaluate LSEs' RA showings in accordance with LRA programs. Please refer to Appendix B which shows a screenshot of a sample of a draft submission and a description of the components of the template.¹³ The screenshot in Appendix B constitutes the entirety of the data the ISO would currently need from the LRA.

This template will be included in the ISO's BPM. The ISO has, in the past, began developing procedural changes that would be implemented in the BPM as part of the ISO stakeholder initiative process. This has two benefits. First, the stakeholder process provides clear guidance regarding the changes that will be implemented through the BPM change management process. Second, it provides the ISO and stakeholders an opportunity to start developing BPM language and/or processes and develop them over an extended period of time so the material can be ready at the start of the BPM change process. To facilitate the discussion now, the ISO has included a proposed template in the appendix of this proposal to engage stakeholders now and develop it with stakeholders in this proposal and further develop it in the next proposal, i.e., the draft final proposal, so much work can be accomplished before the start of the BPM change process. The ISO will continue working with LRAs, as has been done in the past, to continue to develop the specific form and/or documentation for this information exchange.

Timeline

To implement the standard LRA configuration in a timely fashion, the ISO must receive the configuration information for the upcoming RA compliance year at least 30 days prior to the date of the annual RA filings as defined in the ISO's BPMs. During the two months before RA showings are published, the ISO will work with the LRA to evaluate the configuration data, gather the proper LRA documentation to align configurations, and implement any system updates if needed. The ISO intends to formalize under what circumstances it will rely on its default provisions in the tariff, but consider the actual deadline an implementation detail to be established in its Business Practice Manuals.

The ISO previously proposed that if it did not receive the standard LRA configuration or any portion of the configuration the due date, the ISO would use its configuration defaults for that compliance year. These default configurations, which are based on the ISO's default tariff

¹³ The ISO has posted the actual spreadsheet, along with the default values shown in Appendix C, at <http://www.caiso.com/Documents/LocalRegulatoryAuthorityConfigurationTemplate.xls>.

provisions, are included in Appendix C as screenshot of a sample submission of the configuration template.

Stakeholders argued that requiring the full configuration every year might be burdensome especially if nothing about their program has changed from the previous year. Based on the ISO's prior knowledge of LRA RA programs, a large portion of the information on the template seems to be fairly static from year to year; however, there are a few portions that will change each year. Based on the input it has received, the ISO now proposes to differentiate the elements of the template into two types: one type will automatically roll over each year unless the LRA notifies the ISO by the due date; and another type that the LRA must provide the ISO necessary each year. The following four elements are considered necessary to receive each year:

- (1) Annual Individual Local Requirements,
- (2) Annual Individual Flexible Requirements,
- (3) Monthly Individual Local Requirements, and
- (4) Monthly Individual Flexible Requirements.

After an initial submission of the template, all other elements of the template should be submitted only when changes to the LRA's RA program are made that impact that element of the RA program.

5.2 Planned outage substitution rules for Flexible Capacity resources

Background and issues brief

In RSI1, the ISO reexamined many of the core principles underlying the replacement and substitution rules for resource adequacy resources. The ISO redesigned the framework outlining the roles and responsibilities for Scheduling Coordinators representing both LSEs and resources in terms of planned outages of system RA capacity and enhanced forced outage substitution rules. The provisions developed in RSI1 significantly improved the planned and forced outage substitute capacity rules for system capacity and created rules for forced outage substitution for a flexible capacity resource. As a result of RSI1, flexible capacity on a forced outage is required to provide the ISO with capacity that is capable of meeting the must-offer obligation of the same flexible capacity category, or better, of substitute flexible capacity or be subject to the RAAIM. As part of the current stakeholder initiative, the ISO intends to expand outage rules to cover flexible capacity resources that go on a planned outage.

ISO proposal

Substitution rules for flexible capacity resources on a planned outage

In the event of a planned outage for flexible RA capacity, the ISO will allow the scheduling coordinator for the capacity to provide planned outage substitute capacity. Any substitute capacity must comply with the flexible RA category must-offer requirements of the resource on outage. Six Cities provided comments stating that the “Same Category or Better” for flexible RA planned outages was inconsistent with the proposal it filed with FERC. Specifically, Six Cities asserts that ISO Tariff section 40.10.6 supports that Flexible RA capacity should only require that a substitute resource be capable of meeting the must-offer obligation. Upon further review of the tariff language referenced by Six Cities, the ISO finds the language in section 40.6 to be ambiguous as currently written. The ISO intent, is to ensure any substitute capacity is able to provide a comparable quality of flexible capacity to the resource going on planned outage. In the revised straw proposal, the ISO proposed a “category-or-better” requirement for any substitute capacity. Although this proposal had the benefit of eliminating the need to validate that the substitute capacity is providing a comparable level of flexible capacity, it may be overly limiting in determining what resources may be provided for flexible capacity. For example, based on feedback provided by the Market Surveillance Committee and Six Cities, requiring that a resource be qualified to provide 60 starts as required for a base flexible capacity resource would be excessive if the resource is substituted near the end of a month. Although the ISO agrees such a requirement may be overly limiting, there is still a need to ensure that the quality of the flexible capacity is maintained. For example, an SC could show a resource qualified for a given category on the first day of the month, only to substitute it with a lower quality flexible capacity resource on the second day.

The ISO notes that Section 40.10.6 defines the must-offer obligations of the flexible capacity resources shown in specific flexible capacity categories. As such, any resource providing substitute flexible capacity must provide confirmation that the substitute capacity has sufficient starts and run hours to meet the flexible capacity obligations of the resource going on planned outage. This demonstration must be made at the time the request for planned outage is made. The specific timing of this process is further clarified below. If this demonstration is not made, the ISO may deny the planned outage request. Further, with respect to the rules developed in RSI1, the ISO proposes to apply a similar confirmation for flexible capacity on a forced outage. This confirmation will reflect that the substitute capacity has sufficient starts to perform comparably to the flexible capacity it is replacing given the timing and duration of the must offer obligation, and will be assessed under RAIM for that flexible capacity category. For example, if a category one flexible capacity resource takes a one week outage, the substitute resource would have to confirm that (1) it can start or ramp twice a day for every day of the outage (i.e. has 14 starts remaining in the month if two starts per day are required of the resource or seven if one start per day is required), (2) it will be required to economically bid all

flexible capacity of the resource into the day-ahead and real-time markets from 5:00 a.m. through 10:00 p.m., and (3) the ISO will evaluate all flexible capacity from the resource according to the availability rules for the category one flexible capacity must offer obligation.

If the resource providing the substitute capacity (i.e. the new resource) also has capacity shown at a higher category than the original capacity on outage, then substitute capacity must comply with the higher category must-offer requirements for the entire resource's committed RA capacity. For example, a category 1 resource may substitute for a category 2 resource, but if the substitute resource also has a separate obligation to provide category 1 flexible capacity for a portion of its capacity because it was shown on an RA plan on that day as category 1, then it must take on the higher must-offer obligations for all of the RA capacity shown on the resource. In its decision on RSI1a, FERC affirmed this approach as just and reasonable because it reduces implementation complexity and recognizes that flexible categories were created to allow different resources to participate as flexible resources, not to reduce the obligation of resources fully capable of meeting the higher must-offer obligation.

As a point of clarification, the ISO proposed that a resource that has been shown for multiple flexible capacity categories be required to provide substitute capacity at the highest flexible capacity category shown for the resource. The rationale for this is comparable to the rationale FERC agreed with in its decision on the ISO tariff amendment for the RSI1a. Specifically, the ISO stated:

[I]ntroducing multiple categories for a single resource for purposes of determining whether the resource has met the must offer obligation for each category in each hour would add enormous complexity for the CAISO to implement, track, and settle multiple categories, and would decrease transparency.¹⁴

In response, FERC stated that it "believe[s] the complexity of [the] alternatives would undermine the benefits of CAISO's proposal."¹⁵ Similar complexity is created if the ISO is forced to track outages and determine substitution obligations for resources shown in multiple flexible capacity resources.

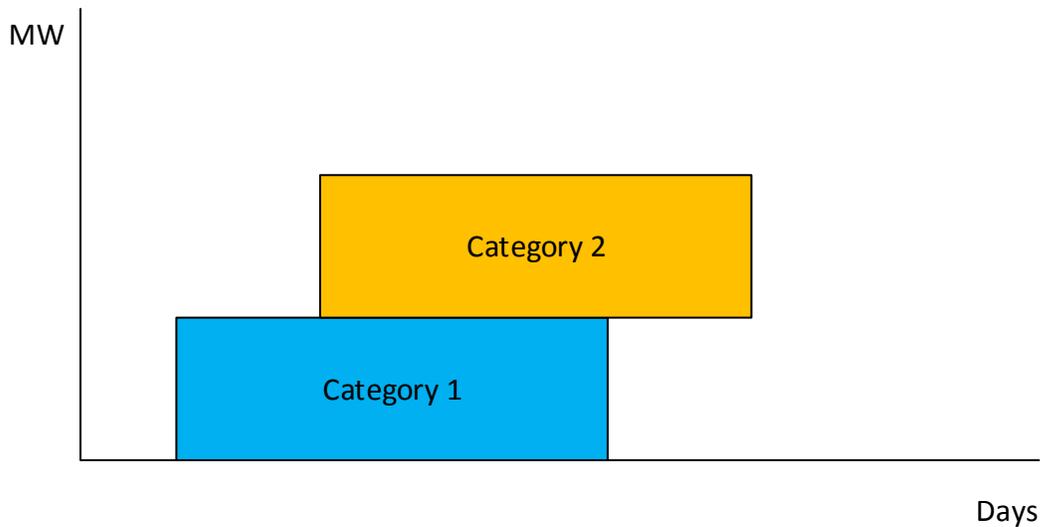
It is possible that a resource may provide two categories of substitute flexible capacity at different but overlapping times during a month. For example, as shown in Figure 1 a resource

¹⁴ ISO RSI1a transmittal letter at p. 41. Available at http://www.caiso.com/Documents/May29_2015_TariffAmendment_Implement_Phase1A_ReliabilityServicesInitiative_ER15-1825.pdf

¹⁵ FERC Order Conditionally Accepting Tariff Revisions. ER15-1825-000 at paragraph 62. Available at http://www.caiso.com/Documents/Oct1_2015_OrderConditionallyAcceptingTariffRevisions_ReliabilityServicesInitiative_ER15-1825.pdf

may be used to substitute for flexible capacity for category 1 days 5-10 and then for category 2 for days 7-12.

Figure 1: Example of Resource substituting for multiple categories of flexible capacity



Based on the RAAIM rules established in RSI1, it is clear that the ISO will assess availability for all capacity using category 1 assessment hours for days 5 through 10. However, once a resource has been designated at a particular category, all flexible capacity shown on that resource will be designated at the highest flexible capacity category. It is the responsibility of the SC for the resource to notify the ISO that it should be converted to category two flexible capacity for days 11 and 12. Otherwise, the ISO will continue assessing the resource as a category one flexible capacity resource.

The ISO will allow a scheduling coordinator to provide flexible substitute capacity beyond the amount on outage and will not limit the amount provided to an assumed needed quantity. In the event of an outage, it is up to the scheduling coordinator to tell the ISO how much RA capacity it wants assigned to the substitute resource. The ISO will hold the substitute resource accountable for up to the provided substitute capacity value and hold the initial resource on outage accountable for the difference between the quantity shown on the resource's supply plan as RA capacity and the quantity told to the ISO that the substitute resource will provide.

For example, assume resource A was shown for 100 MW of flexible RA, has an EFC of 150 MW, and goes on outage for 50 MW. Although it may seem like the resource can still meet its flexible RA requirement, there may be other constraints on the resource that the ISO is not aware of and cannot account for in the tracking process. Therefore, the ISO will allow the scheduling coordinator to indicate a substitute value. For example, resource A can indicate

resource B has a substitute capacity quantity of 20 MW. The ISO would then assess resource A under the flexible availability incentive mechanism for 80 MW (100 MW – 20 MW) and assess resource B under the flexible availability incentive mechanism for 20 MW.

Timeline for flexible capacity resources on a planned outage

The ISO proposes to apply the same timeline for flexible capacity resources on planned outages as it proposed in RSI1 for system and local resources on planned outages. Specifically, the ISO will utilize the same timeline as in Appendix D of the RSI1 proposal, which will be in effect in 2017 that will change both the timeline and responsibilities for entities. This timeline is included in Appendix D of this document. The new planned outage substitution process, which will be filed at FERC as part of the ISO's RSI1b filing, is as follows:¹⁶

Beginning at the green flag at T- 45, the ISO will validate LSE and supply RA plans for discrepancies (differences between LSE and supply plan) and for shortages (difference between LSE's monthly requirement and amount on RA plan). The ISO will ask for specific local, system, and flexible showings. These results will be made available to the LRA, LSE, and supplier. The ISO will then allow a cure period for LSEs to cure any shortages until T-25. At this point, according to tariff section 43, the ISO has the authority to backstop for deficiencies using the CPM. The only change would be the addition of the ISO asking for LSEs to specifically indicate the RA type (flexible, system, local) and the timeline the RA process occurs. The ISO proposes no other changes to the traditional monthly RA process.¹⁷ Currently this process begins at T-45 and is finalized at T-7. The ISO proposes that the monthly RA process now run from T-45 to T-25. The new timeline is described fully in Appendix D (*appendix omitted*).

The revised monthly RA timeline allows the ISO to fully separate the monthly RA process from the planned outage analysis process. Therefore, the second purpose of the ISO's monthly planning process - to ensure planned outages do not affect real-time reliability - will be conducted entirely after the monthly RA plan process is completed at T-25. The ISO will then run the outage impact assessment [for flexible RA] and allocate any responsibility to provide planned outage substitute capacity on the supplier in last in, first out ("LIFO") order. Suppliers will then provide additional capacity or risk having their planned outage cancelled or denied, and risk availability incentive mechanism penalties if the outage is denied and the resource still goes on outage. If the ISO required additional capacity for the planned outage and the supplier did not provide the additional capacity, the outage

¹⁶ Reliability Services Initiative – Phase 1 at <http://www.caiso.com/Documents/DraftFinalProposal-ReliabilityServices.pdf>

¹⁷ The impact on the CPUC RA program is that the ISO's timeline for being able to provide supplier data and LSE shortages has moved 15 days earlier than the current timeline and the amount of time between notifying the CPUC of a shortage and doing the CPM assessment has decreased from 14 to 10 days.

capacity will be subject to the availability incentive mechanism. The availability incentive mechanism penalty is proposed to initially be \$3.79/kW-month.

If after the supplier provides planned outage substitute capacity, the planned outage moves for any reason, the ISO will allow the supplier to release any provided planned outage substitute capacity up to the substitute capacity amount.

5.3 Planned and forced outage substitute capacity for RA resources capacity in local capacity areas

Local RA resources that go on *forced* outages must provide comparable capacity or be subject to availability incentive charges. In other words, RA resources in local capacity areas that go on a forced outage must provide substitute capacity that is also in a local capacity area or be subject to availability charges. Some stakeholders have asserted that the ISO should only require that substitute capacity come from another local capacity resource if the resource is required for local reliability issue or has been explicitly procured to provide local RA capacity. These stakeholders argue that if the capacity on outage is not needed to meet an LSE's local requirement or was not procured to provide local RA capacity, the ISO should only require substitute capacity from system resources to avoid availability charges. As part of the RSI1 initiative, the ISO committed to reviewing this policy. The remainder of this section discusses each of these issues in greater detail.

The ISO may require substitute capacity for local resources that go on *planned* outages or deny the outage. As part of this stakeholder process, the ISO will assess whether it is possible to allow for local substitute capacity as a means to allow the resource to take a planned outage.

Local capacity resources on forced outages

The ISO's current policy for RA resources located in a local capacity area that go on a forced outage is to require like-for-like substitute capacity (i.e. provide substitute capacity from another resource in a local capacity area) or be subject to RAAIM charges. The specific question before the ISO is: If an RA resource in a local area that was procured by an LSE for system capacity goes on a forced outage, could it provide substitute capacity from a system resource to avoid RAAIM charges? If such a change is warranted, the ISO must consider how potential new policies could be applied and what would be the implications of these new policies on local reliability. The remainder of this section outlines the ISO's review of the LCR study process, potential new policy options, and the implications of each option. The ISO will not propose

changes to the existing like-for-like substitution policy for RA resources in a local capacity area that go on a forced outage unless the alternative policy represents a pareto improvement.¹⁸

In the straw proposal, the ISO discussed in greater detail the history and the process of the Local Capacity Area Technical study as well as the four options that had been considered to modify the existing local-for-local substitute capacity (i.e. provide substitute capacity from another resource in a local capacity area).¹⁹ Based on that assessment, the ISO determined that adding an additional flag to monthly and annual RA submissions to track system and local procurement, allowing for like-for-like substitute capacity for forced outages is the best option to improve the ISO substitution policy for local resources on forced outage. Stakeholders appear to agree with this assessment.²⁰ As such, the ISO will now focus on further developing this option and provides greater detail regarding the implementation of this option, below.

As noted above, the ISO does not currently track whether capacity has been procured to meet system or local capacity requirements. The ISO proposes to add a designation to year-ahead and month-ahead RA showings and supply plans that identifies the specific resources on which LSE is relying on to meet its local capacity requirements. This designation will apply to the entire resource. In short, any resource that is designated as providing local RA capacity for any portion of its capacity will be treated as a local RA resource for the entirety of the resource's RA capacity, even if additional RA capacity has been sold to another LSE as system capacity. If a resource is sold to two LSEs for different capacity products, one as system and one as local, the entire resource will be designated as local for purposes of forced outage substitution. Based on stakeholder feedback, there may be merit to exploring further delineation of how capacity in local capacity areas is sold (i.e. partial local) at a later date. The ISO believes that the instant proposal provides significant benefits while minimizing potential for any unintended consequences and provides necessary time for the CAISO and stakeholders to monitor how this first step works before implementing a more granular approach.

The ISO examined policy changes that would allow for partial local RA capacity (i.e. a resource that has sold part of its capacity as system only and part for local capacity). Creating more "flavors" of substitute RA capacity increases the likelihood for unintended consequences that could be avoid by first taking this transitional step.²¹ Developing the tools for partial local RA would require LSEs create a separate local RA showing. This showing would demonstrate

¹⁸ A pareto improvement is a change that benefit some parties while leaving no other party worse off because of the change.

¹⁹ See Section 5.3 of the straw proposal in this initiative for greater detail. Available at <http://www.caiso.com/Documents/RevisedStrawProposal-ReliabilityServicesPhase2.pdf>

²⁰ PG&E was the only stakeholder that commented on the ISO's revised straw proposal that felt no change was required

²¹ Only NRG provided specific comments support whole resource classification, recommending that partial local functionality could be considered as a future enhancement, as needed.

capacity that is dedicated to local capacity only. This essentially would fully separate the system and local aspects of the capacity. This could potentially allow one LSE to procure the system attribute of resource while another LSE could procure only the local attribute. While there may be benefits of such a structure, it is not clear that such a structure is compatible with LRA capacity programs. For example, the CPUC's RA program currently considers all local capacity as system capacity. Making a fully separable local capacity product must be done in conjunction with LRAs to avoid double procurement of capacity.

Based on the above concerns, the ISO has determined the additional complexity created from allowing partial local RA capacity resources outweighs the benefits at this time. The ISO suggests that such delineations could be considered in a future stakeholder initiative and in conjunction with LRA RA programs, but seeks additional stakeholder input on the this aspect of the proposal.

The ISO will only use the designated local capacity, not the total capacity of the resource, to determine if an LSE has shown sufficient local capacity to meet its local capacity requirements. This ensures LSE's cannot procure small amounts of local RA from a resource, expecting to lean on the remainder of the resource's, which may have been procured as system capacity or not at all, as counting towards the LSE's local capacity requirement. In the event of a discrepancy between the RA showing and a supply plan (i.e. a resource is flagged as local on one, but not the other), the ISO would maintain its current practice of defaulting to the supply plan, but notifying both parties of the discrepancy. If an LSE has not designated sufficient local capacity to meet its requirement, the ISO will notify the LSE of this deficiency and provide the LSE with an opportunity to designate additional local capacity. If an LSE designates sufficient local capacity to meet its individual local RA requirement, it not be allocated CPM costs caused by an individual local deficiency. While the ISO will assess the adequacy of individual LSEs using only designated resources, the collective deficiencies in a local area would still be determined using all RA resource that impact the given local area, as is done today. This is necessary due to the need to accurately model the topology of the local area and capture all resources impact (positive or negative) on the local area.

All resources with designated local RA capacity that go on a forced outage will be required to provide substitute capacity for the total amount of RA capacity from another local capacity resource or be subject RAIM charges. The substitute capacity must come from another non-RA resource. If any RA resource not designated as a local RA resource, even a resource physically located in a local area, goes on forced outage, then it would only be required to provide substitute capacity from another system resource to avoid any potential RAIM charges. In this scenario, there is no opportunity for the LSE to take any additional action. This differs from proposals submitted by several stakeholders that requested an opportunity to provide substitute capacity. However, after considering stakeholder comments to allow for

supplemental showings, the ISO determined that such an opportunity is not needed for two reasons. First, the LSE, through the month-ahead RA showing fully established the responsibilities for providing substitute capacity.²² Because this is a forced outage, all substitute capacity obligations are borne by the SC for the resource. Second, the timeline for the RA showings closes prior to the operating month. As such, there may not be time for an LSE to make a supplemental showings prior to CPM designation. This provides an incentive for LSEs to mitigate CPM risks through the month-ahead showings by designating effective local capacity resources with local-for-local substitution requirements.

As noted above, the ISO's standard for deciding whether to pursue a change to the existing local-for-local substitution rule for RA resources in a local capacity area that go on forced outage is that the compliance with the ISO's local reliability standards should not be degraded by changing the rules. After considering four options, the ISO believes that requiring specific local RA designations is the best solution and is a pareto improvement relative to the status quo. Specifically, this option provides a mechanism by which LSEs can show the ISO the resources it is relying on to meet its local capacity obligation. Further, for resources procured to specifically provide system or local capacity, it more closely aligns the substitute capacity cost risk with the type of capacity for which it has been procured. Finally, the obligations for substitute capacity are clearly defined, allowing LSEs to show all local capacity they have procured. Therefore, the ISO proposes to create a specific local capacity designation and require like-for-like substitute capacity for forced outages based on this designation.

Local capacity resources on planned outages

As noted above, when resources in a local capacity area go on planned outage, the ISO may require substitute capacity. If the capacity is not needed to meet local reliability, the ISO may approve the outage, but allow for substitute capacity from system resources. If, however, the resource is needed for local reliability, the ISO will deny the planned outage and request the SC of the resource reschedule the outage. If the resource cannot defer the outage, then the outage must be taken as a forced outage and is subject to RAAIM. Currently, these are the only two treatments for resources in a local capacity area deal with planned outages. In the revised straw proposal, the ISO is proposed a third option. If the resource is needed for local reliability and cannot defer the outage, it can provide substitute capacity from another local capacity resource.

In comments, Calpine asked that the ISO extend the proposal for forced outages to also cover planned outages, while SDG&E raised concerns that allowing such an options would lower the total amount of capacity used in determining if there is a collective deficiency. SDG&E and Calpine comments both capture a similar point. Specifically, how does the ISO's proposal improve the substitution options for local capacity planned outages? The ISO has

²² The processes and obligations for providing substitute capacity were established in RSI1. The ISO will file tariff language reflecting this process in early 2016.

continued to review the planned outage process to determine the full impact of its proposal. The planned outage process begins with a reliability assessment. This assessment is done for **all** resources requesting planned outages regardless of the resources RA status. The reliability test accounts for all previously planned outages for both generation and transmission. If the resource outage passes the reliability test, including local reliability, then the outage is conditionally approved. Once the ISO conditionally approves an outage, the ISO will then look to see if there is sufficient system RA capacity remaining after the outage or if additional substitute capacity is needed to fulfill system requirements. If no additional RA capacity is needed, then the ISO will approve the outage. If substitute RA capacity is needed, then the ISO will approve the outage only after it approves the substitute capacity.

Based on further review of this process, the ISO does not see a benefit from extending the proposed change to the planned outage substitution rules for RA resources located in a local area requesting a planned outage. As noted above, the ISO conducts the reliability study for all resources regardless of RA status (local or otherwise). If the resource can reliably take the outage, then the only substitution that is required is to ensure the planning reserve margin is maintained. If the resource going on outage is located in a local area and the outage is approved, then the substitution could be system capacity. Allowing a resource to take a planned outage even though it has failed the ISO's reliability test, regardless of the type of capacity it has been procure for, risks degrading system reliability. As such, the ISO is removing this component of its proposal.

5.4 Process for updating resources' EFC and/or operational parameters

In the FRACMOO stakeholder initiative, the ISO established the methodology for calculating a resource's EFC. Specifically, the ISO will calculate a resource's EFC annually using a resource's NQC and other operational attributes of the resource. Now that flexible capacity requirements are in place, the ISO has identified a need to improve the EFC calculation and change management process. Specifically, the ISO will clarify the process by which a resource may change its EFC through the course of the year.

Updating EFC values

There are several reasons a resource may request an EFC update during the year. Examples include a resource switching from non-dispatchable to dispatchable, a new resource comes online, a resource's NQC increases. Several SCs have already contacted the ISO for EFC changes mid-year. The ISO will update a resource's EFC only upon request from the SC for the resource. These updates will not be done automatically. If a non-dispatchable resource becomes dispatchable, the SC for that resource must request the ISO review the EFC for the resource after the change takes effect. This also covers changes to the NQC of a resource. The SC for a resource must request the ISO review the EFC value either at the same time or after the SC

submits the request to change the NQC value. The formal request must be submitted to the Reliability Requirements mailbox at the ISO.

Using reported use-limitations

Determining flexible capacity categories

In RSI1, the ISO established a process by which SCs for use-limited resources will provide resources' use-limitations to the ISO. The use-limitations captured through this submission include any applicable monthly start-limitation for a resource. The ISO will utilize this data to determine whether a resource qualifies to provide Base, Peak, or Super-Peak flexible capacity. Specifically, the ISO will utilize the use-plans provided for each resource from the previous year to help determine the resource's flexible capacity category. If the use-limitations for a resource are expected to change for the upcoming RA year, then the SC for that resource may submit comments and supporting documentation to the ISO as part of the comment period on the draft EFC list. The use of the monthly use-limitation data ensures the ISO has more data than daily limits to base category qualifications. For example, under the current rules, a resource with one start per day, but only 15 starts per month, may qualify as a Peak flexible capacity resource. However, by accurately capturing the 15 starts per month, the ISO will be able to more properly identify the resource as eligible to provide super-peak flexible capacity.

Use-limited reached outage card RAAIM treatment

The ISO is developing an opportunity cost methodology for use-limited resources under Commitment Cost Enhancements Phase 3.²³ By allowing use-limited resources to reflect opportunity costs of the limitations through commitment cost bids, the resource can be more efficiently optimized over the limitation horizon. When use-limited resource adequacy and flexible resource adequacy resources reach their limitations, scheduling coordinators must submit an outage card indicating the resource has reached the limitations, and is no longer available for the remainder of the limitation horizon. When a resource reaches a monthly limitation, it must submit a monthly use-limited reached outage card. The resource will then be exempt from RAAIM for the remainder of the month until it becomes available again starting the first day of the subsequent month. When a resource reaches an annual limitation, it must submit an annual use-limited reached outage card. The resource will be non-exempt from RAAIM.

Use-limited capacity that becomes unavailable may have been previously shown on annual or monthly resource adequacy showings. Currently, there are no rules disqualifying use-limited resources that are no longer available from continually being shown on RA plans. The ISO needs to ensure sufficient capacity to meet monthly requirements is still available when

²³ The most recent proposal can be found at <http://www.caiso.com/informed/Pages/StakeholderProcesses/CommitmentCostEnhancementsPhase3.aspx>

needed. Not exempting use-limited resources from RAAIM once they become unavailable beyond the current month is intended to provide an incentive for scheduling coordinators to show substitute capacity that is still available to the market.

For illustrative purposes, consider a resource reflected in the chart below that has a monthly limitation of 20 starts and an annual limitation of 100 starts. The scheduling coordinator would submit a monthly use-limited reached outage card in February, March, April, and May once the resource uses the 20 starts. The outage would extend to the end of the respective month, exempting the resource from RAAIM during the outage period; on the first day of the subsequent month, the resource is no longer on outage.

The second row shows the remaining starts of the annual limitation. Given the monthly starts in the first column, the resource reaches its annual limitation in June; it has not reached the monthly limitation in June. The scheduling coordinator would be required to submit an annual use-limited reached outage card, which extends to December 31st of the current year. The resource would be non-exempt from RAAIM unless substitute capacity is provided.

In the event the example resource reached the monthly limitation in June, as well as the annual limitation, the ISO will first determine if the outage is exempt based on the monthly limitation. In this case, the resource would be exempt from RAAIM in June and non-exempt from RAAIM starting July 1st.

	Jan	Feb	Mar	Apr	May	Jun	Jul
Monthly starts	10	20	20	20	20	10	0
Remaining annual starts	90	70	50	30	20	0	0

5.5 Masterfile changes and RAAIM availability

Since the implementation of FRACMOO, resources have requested adjustments to their operational parameters that either increase or decrease their flexible capacity quantity. The changes submitted fall into two categories: changes that impact the quantity of EFC a resource is eligible to provide and changes that impact the category of flexible capacity the resource is eligible to provide. This section discusses how the ISO will address each of these change requests.

Masterfile changes that impact the quantity of EFC the resource may provide

There are several Masterfile variables that can impact how much EFC a resource may be able to provide. For example, start-up time determines whether a resource’s PMin is eligible to provide flexible capacity. It is possible, however, that a resource may request a change to

Masterfile that increases the start-up time. The ISO has reviewed Masterfile changes such as these that only impact the quantity of EFC a resource is eligible to provide and has determined that the RAAIM tool developed in RS11 is sufficient to address these changes. Specifically, if a resource SC makes a change that lowers its EFC (*e.g.*, increasing its start-up time), then it needs to ensure the change does not impact its ability to economically bid sufficient capacity to fulfill its flexible capacity must offer obligation. Because a Masterfile change does not constitute an outage, a resource would not have the ability to provide substitute capacity and be subject to RAAIM for any unfulfilled capacity requirements.

The two Masterfile fields that impact the quantity of EFC are start-up time and PMin. Given the recent approval of the ISO's new RAAIM, there is no need to modify the ISO's current practices regarding Masterfile changes to start-up time and PMin and the quantity of EFC a resource provides. Ramp rate changes may not impact the resource's ability to meet the must offer obligation for the flexible capacity category for which it is shown. However, it may limit the ISO's ability to ramp the resource over its full EFC over a 3 hour ramp. There is currently no means by which the ISO could capture this change under RAAIM. At this time, the ISO will not propose assessing RAAIM charges based on Masterfile changes based on ramp rate changes. Instead, the ISO will continue to assess the frequency and impact of such changes and will revisit this issue as needed.

Masterfile changes that impact the eligibility to provide a category of flexible capacity

As noted above, the ISO determines the category of flexible capacity a resource is able to provide based on several Masterfile variables, including start-up time and daily starts. It also requires the resource be listed as dispatchable in Masterfile to be eligible for an EFC calculation. Start-up time and daily starts are of particular importance because they determine whether a resource qualifies to provide base ramping flexible capacity. For example, if a resource has one start per day, then it would only be eligible to provide base flexible capacity if its other operational parameters, like minimum downtime, create an operational limit that prohibits the resource from starting more once per day.²⁴ As such, changes to Masterfile parameters following Masterfile parameters can change the category flexible capacity for which a resource qualifies or if it is even eligible to provide flexible capacity at all:

- 1) Minimum down time – used to determine if a resource requires one start per day or two to qualify as a category 1 flexible capacity resource²⁵
- 2) Daily starts – Using minimum down time, resource may require either one start or two to qualify a category 1 flexible capacity resource

²⁴ This means the resource would only be eligible provide flexible capacity above PMin.

²⁵ Currently the ISO uses 12 hour minimum down time to determine if a resource must start once or twice a day to qualify as a Base Flexible Capacity resource.

- 3) Dispatchability – All resources providing flexible capacity must be designated as dispatchable.

The ISO is not proposing any changes to the definitions, rules, or parameters originally established in the FRACMOO stakeholder process. As an example of how changes to the above Masterfile can impact the availability of the resource to the market, a short start resource that changes the number of starts per day from two to one would not be eligible to provide base ramping flexible capacity. Even if the resource bid into the ISO’s market for all 17 hours required under the base ramping must-offer obligation, the resource would be optimized in the ISO’s market as a short-start resource with a single start.

Unlike Masterfile changes that only impact the quantity of EFC a resource can provide, the new RAAIM tool may not capture the impact of changes to a resource’s flexible capacity category. Therefore, the ISO proposes to apply the RAAIM to resources where Masterfile changes disqualify them from providing a flexible capacity category. Specifically, the ISO proposes to assess as unavailable under RAAIM resources that change Masterfile parameters that lower the flexible capacity category eligibility to a category below the one for which it is shown. These resources may provide substitute capacity to avoid exposure to RAAIM charges. The ISO will assess the resource as unavailable starting on the effective date of the Masterfile change and will cover the entire EFC for which the resource was shown in the higher flexible capacity category. Further, the resource SC is obligated to ensure that any Masterfile changes are consistent with the flexible capacity category for which the resource is shown.

Some stakeholders have requested the ISO provide notification when a Masterfile change will result in a change that would impact the category the resource qualifies. The ISO has clearly identified the fields that could result in a category disqualification (as well as EFC quantities, above). As such, it is the SC’s responsibility for knowing the implications of Masterfile changes and a resource’s exposure to RAAIM charges.

5.6 Combination Flexible Capacity Resources RAAIM exemptions

After FERC conditionally approved the ISO’s FRACMOO tariff, Six Cities sought rehearing regarding a specific provision of the must-offer obligation for “combination” flexible capacity resources. Flexible capacity combination resources allow LSEs an opportunity to meet their flexible capacity requirements with resources that may not qualify for a higher flexible capacity category combining two resources.²⁶ Originally, the ISO had proposed that both resources in

²⁶ Combination flexible capacity resources are a pair of flexible capacity resources that individually do not meet the requirements for a higher flexible capacity category, but when combined are able to meet the requirements for the higher category. For example, two resources with 30 starts per months and 2 starts per day would not qualify for the Base Ramping flexible capacity category. However, when combined, they would meet the minimum

the combination be subject to the economic bidding must-offer obligations. Six Cities asserted that the ISO should not hold both resources in the combination to the flexible capacity must-offer obligation. As a result, the ISO agreed to clarify the tariff to state that at least one of the resources in the combination must provide economic bids during the must-offer obligation window.

In its April 10, 2015 filing to FERC submitting this revision, the ISO stated that the provision “allows either resource in a use-limited combination to meet the must-offer obligation; however, only one resource in the combination can submit bids each day.”²⁷ FERC approved the revised proposal. The revised tariff language approved by FERC ensures that at least one of the combined resources is available to the ISO for up to the EFC of the combination. However, approval of this language occurred after the ISO Board approved the RSI1 policy. As such, the ISO was not able to develop the tariff provisions and structure needed to appropriately apply the RAAIM rules to combination flexible capacity resources consistent with this new tariff language. As a result, the ISO proposed a temporary exemption from the RAAIM calculation for combination flexible capacity resources.

With the must-offer obligation for combination flexible capacity resources now clearly defined, the ISO proposes to eliminate this exemption and develop RAAIM rules that can be applied consistent with those applied to other resources within the same flexible capacity category. In the straw proposal the ISO considered an option that allowed for a limited exemption from the minimum criteria for monthly starts for a flexible capacity resource. The goal of this exemption was to provide the same functionality as was offered by the combination resource option while allowing for a simplified implementation of the RAAIM calculation. However, after further consideration and review of stakeholder comments, it is not clear that the ISO’s straw proposal achieved that objective. Therefore, the ISO has determined it is necessary to maintain the combination flexible capacity option and that there is no need for the limited exemption proposed in the straw proposal and has eliminated that option. Instead, the ISO proposes to develop a calculation that treats both resources in the combination as a single resource solely for the purposes of determining RAAIM charges or payments. This option is outlined below, and the ISO seeks stakeholder input on it.

Tracking the daily maximum performance from the combination flexible capacity resources

In its April 10, 2015, FERC filing in ER14-2475 RSI1, the ISO stated that RA capacity is a daily product that comes from a given MW of capacity. This means that the ISO only needs a single resource from the combination to provide that flexible capacity on any given day, and the ISO

number of starts required to qualify for the flexible capacity Base Ramping flexible capacity category. Details on combination flexible capacity resources can be found in Section 40.10.3 of the ISO tariff.

²⁷ See ISO’s April 10, 2015 filing in ER14-2574 at p. 3.

only needs to assess the availability of a single resource over the duration of a day. As such, the ISO will not consider allowing combinations of two resources to meet a single daily availability requirement as requested by SCE. Instead, the ISO proposes to assess the combined resource’s availability using the maximum *daily* availability of the two resources. The ISO would calculate the combined resources’ availability on a given day using the resource that was most available (*i.e.*, complied with the applicable flexible capacity must offer obligation for the most hours that day). For example, the following is a hypothetical combination flexible capacity resource:

Resource	PMax	System RA	Flexible RA ²⁸
Resource A	125	100	75 (combined)
Resource B	100	50	75 (combined)
Total	225	150	75

In this example, Resource A has a 100 MW system RA requirement and Resource B has a 50 MW system RA requirement. Additionally, Resource A is combined with Resource B to provide 75 MW of flexible capacity. Therefore, the must-offer obligation of Resource A is to provide 100 MW of capacity. If B is not providing flexible capacity on a given day, then 75 MW of Resource A must meet the flexible capacity must offer obligation while the remaining 25 MW of capacity would be subject to the system RA must-offer obligation. Because Resource B is shown for less system capacity than flexible capacity, it can meet both its system and flexible capacity must-offer obligation by meeting the combination flexible capacity obligation.

For a hypothetical 10 day month, the two resources have the following availability for flexible capacity:

Resource	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Total
Resource A	95%	93%	92%	90%	75%	0%	0%	80%	90%	97%	
Resource B	75%	80%	90%	92%	80%	90%	92%	75%	80%	50%	
Maximum	95%	93%	92%	92%	80%	90%	92%	80%	90%	97%	90.1%

It does not matter which resource is more available during a specific hour within the day, only which resource is the most available for the entire day. This is a simplified example of how the ISO will assess the flexible capacity availability for combined resources. However, the ISO must be able to calculate the total availability obligations, system and flexible, of both resources. Only the flexible capacity aspect of the resources are combined, not the system obligations.

²⁸ Flexible capacity combinations can only be made up of two resources and the flexible capacity offered must be the same from both resources in the combination.

System obligations remain cumulative. As such, the appropriate way to measure the availability of the resources is to assess the *total* obligation.

In order to apply RAAIM to combination flexible capacity resources, the ISO proposes to create a pseudo-resource for the two resources in the combination. This pseudo-resource is used only for purposes of calculating RAAIM charges or payments and has no other implications on the bidding behavior, dispatches, or other settlements for the two resources in the combination. The need for creating this pseudo-resources comes from the need to capture both the full system and flexible capacity obligations contained by the combined resources. In the example above, the total system capacity sold is 150 MW, while the flexible obligation is 75 MW. In RSI1, the ISO developed a rule that stated that RAAIM would calculate a resources availability by assessing the resource’s adherence to its highest quality must offer obligation. Therefore, the ISO’s RAAIM assessment uses compliance with the flexible capacity must-offer obligation for 75 MW flexible capacity first, then assess compliance for must-offer obligation for system capacity. Without the use of the pseudo-resource, the RAAIM assessment would look at the compliance of each resource separately. For combination flexible capacity resource this would be seen as both resources meeting the flexible capacity must-offer obligation because if one resource meets the flexible capacity must-offer obligation, then both resources meet the obligation. In the above example, if Resource A meets flexible capacity must-offer obligation, so does Resource B. However, although it appears as though Resource B met its must-offer obligation for flexible capacity, because of the structure of the combination resource it might not have met its system level must-offer obligations. As an example, assume that Resource B goes on an outage. If the ISO were to apply the RAAIM calculation developed in RSI1 to each resource in that combination, then it would calculate the availability of the resources as follows:

Resource	Flexible Capacity Availability	Incremental System Capacity Availability ²⁹	Total
Resource A	75	25	100
Resource B	75	0	75

In the table above, Resource B has a must offer obligation for flexible capacity that is greater than the obligation for system RA. However, Resource A may be the resource that is used to meet the flexible capacity obligation for the combination. If Resource B goes on outage and Resource A is used to meet the flexible capacity requirement, then there would appear to be no need to provide substitute capacity for Resource B’s outage. If Resource B goes on a forced

²⁹ System capacity must-offer obligation is also fulfilled through the flexible capacity must offer obligation. Therefore, the RAAIM calculation for system capacity only need to assess the incremental capacity above the flexible capacity obligation.

outage, then the ISO would be short of 50 MW of system capacity. Therefore, it is necessary to develop a tool that will apply RAAIM in such a way that provides the incentive to substitute the remaining 50 MW of system capacity.

The ISO proposes to create a single pseudo-resource that will capture all of the requirements of both resources. The single resource will use the sum of the system level obligations and the combined flexible capacity obligation of the two resources. As an example the above combination flexible capacity resource would have the following RAAIM requirements:

Resource	Flexible Capacity Availability	Incremental System Capacity Availability	Total
Resource C	75	75	150

Once this pseudo-resource is created, using the daily available flexible capacity calculation described above, the ISO will be able to apply the RAAIM calculation as is done for all other resources. Further, for purposes of settlements, because the resources in the combination are required to have the same SC, it is not necessary to determine the specific contribution of the each specific resource in the combination. For example, the ISO would settle RAAIM charges with the SC as if the combination was a single resource providing 75 MW of flexible capacity and an additional 75 MW of system capacity. Therefore, it is not necessary to determine the applicable contributions for Resource A and/or Resource B, the calculation only needs to be done on Resource C’s compliance.

5.7 Streamlining annual and monthly RA processes

In comments to the straw proposal, the Small POU Coalition requested the ISO streamline the RA process for small POU. The ISO has considered this request and has determined that it is reasonable to include this request as part of the scope of RSI2. While the Small POU Coalition requested the ISO look at the process and penalties for only small POU, the ISO believes that trying to create a delineation could be viewed as arbitrary and, further, is not necessary. The ISO is not proposing any changes to the existing penalty structure based on LSE size. However, the ISO is proposing means by which RA showings can be streamlined.

Each year, LSEs are required to submit year ahead RA showings. The ISO proposes to automatically roll all RA showings made in annual plans into the monthly RA showing for all LSEs.³⁰ In comments, the Small POU Coalition asks for clarification about the impact of the ISO’s proposal for monthly plans and missing or late information. Specifically, the Small POU

³⁰ Until the implementation of this policy, LSE can enter all 12 monthly RA showings at the same time as its annual showing as is currently allowed.

Coalition requests confirmation that “because the monthly plans are rolled over from the annual plan, a monthly plan update is not missing or late information. In other words, though there may be a discrepancy or deficiency in a monthly plan that requires an update, the plan would not be missing or late, since it is automatically rolled over.” As a general matter the Small POU Coalition is correct that if the ISO were to implement the change as proposed, then a SC representing a LSE automatically would have a monthly RA showing in place and thus, absent other factors, would not be at risk of facing penalties under section 37.6 of the ISO tariff for a late or missing monthly RA plan. LSEs, however, may still be subject to other charges if discrepancies are unresolved or the data provided in the year-ahead showings are not sufficient to cover all month-ahead obligations. If an LSE wishes to make changes to the annual plan as part of the monthly RA showing, then it may do so as part of the monthly RA timeline. This means that ALL monthly assessments, including for discrepancies with supply plans, of RA showings for an LSE that makes no changes would be done with the showings provided in the year-ahead showings. Monthly RA plans are currently due at t-45 days before the operating month.

Although the ISO proposes to automatically roll annual RA showings into monthly showing, it is not proposing to automatically roll resource supply plans into the monthly showings. Six Cities requested the ISO allow this to occur if the SC for the resource requests. However, automatically rolling over supply plans is not comparable to rolling over RA showings. In the case of rolling over RA showings, LSEs could eliminate unnecessary penalties associated with a failure to submit plans. However, for supply plans, this automation, even if requested in the year ahead timeframe, could result in unnecessary accidental penalties. For example, if an SC asks for its supply plan to be automatically rolled over and then is removed from the monthly RA showing it would need to take action to avoid penalties. As a result, the ISO declines to rollover supply plans. This ensures that resources, which will ultimately bear the substitute capacity burden, actively review their upcoming RA obligation.³¹ If no supply plan is provided, the both the LSE and the resource SC will notified of the discrepancy. The ISO will send an informational message to LSEs notifying them that if no action is taken, then the ISO will assess the LSE’s RA plans using the information provided in the year-ahead showing.

6. Next Steps

The ISO will host a stakeholder call on November 20, 2015 to discuss the contents of this revised straw proposal. Stakeholders are welcome to submit written comments by December 9, 2015 to initiativecomments@caiso.com. Stakeholders should submit their written comments

³¹ An SC for a resource may actively enter monthly supply plans for the upcoming year at the same time as it enters its annual supply plan.

using the template that has been posted to the web page for this initiative at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/ReliabilityServices.aspx>.

Appendix A: Stakeholder Comments and ISO Responses Matrix

Topic *	Name of Stakeholder	Stakeholder Comment	ISO Response
1. LRA RA Process Alignment	CDWR	Certain questions in the LRA configuration template ask for “yes” or “no” response. However, there may be extra explanations needed beyond “yes” or “no” response and that description may represent how LRAs adopt existing methodology with regard to the question. So, the template should have a column that allows input of description in addition to “yes” or “no” response.	The ISO’s goal is to collect only basic information from LRAs to set up various ISO systems.
	CPUC	Given this clear mandate, we believe it is inappropriate for the CAISO to place requirements in its tariff which would constrain the CPUC in any way from performing its statutory obligation to develop and implement the CPUC’s RA program. CPUC Staff object to any provision in the CAISO’s tariff or business practice manual that binds the CPUC to a schedule other than its own, or implements CAISO requirements in lieu of CPUC requirements. In sum, we strongly urge the CAISO to remove this section from the RSI initiative.	The ISO’s efforts on this front are to provide clear rules and application if the ISO’s existing default RA provisions. This clarity should benefit all LRAs and ISO market participants. The ISO does not view this effort as an attempt to “binds the CPUC to a schedule other than its own, or implements CAISO requirements in lieu of CPUC requirements.”
	CPUC	As we indicated in prior comments, the CPUC Staff appreciate the opportunity to work to make the Resource Adequacy (RA) process more efficient and streamlined and we believe that an important first step in this collaborative process is to provide the CPUC access to the CAISO’s automated CIRA (Customer Interface for Resource Adequacy) system.	The ISO is committed to working with the CPUC to ensure that the CPUC has timely access to data requested as part of the annual CPUC subpoena process. Further, the ISO is exploring options with the CPUC may allow limited access to some aspects of the CIRA application.

	PG&E	<p>PG&E supports and appreciates the CAISO’s focus on alignment between LRAs and CAISO, as well as streamlining the RA filing process. The change in the deadline for LRAs to provide its RA guidelines to CAISO from September 1st to October 1st is helpful, however PG&E looks for the CPUC’s feedback as to whether this date is appropriate based on the current schedule.</p>	<p>The ISO appreciates the support for the changed deadline. The ISO’s efforts on this front are to provide clear rules and application if the ISO’s existing default RA provisions. This clarity should benefit all LRAs and ISO market participants.</p>
	SDG&E	<p>Specifically, SDG&E does not believe this interaction and process alignment requires Tariff involvement. This should be the result of a collaborative effort between the LRAs and CAISO.</p>	<p>The process alignment effort will require the ISO to make a tariff change with the regard the effective date of the ISO’s default RA provisions. While the specific date will likely be part of the ISO’s BPM, there are minor tariff changes that are also needed.</p>
	SDG&E	<p>ISO must first fully assess all potential data, systems security, and integrity requirements...This issue is beyond the scope of the RS12 stakeholder initiative.</p> <p>Please provide a schedule for this review. When will ISO complete this review and make the details public? What is the threshold for the cost benefit analysis for ISO to implement an interface?</p>	<p>This comment appears to refer to the ISO’s commitment to review potential opportunities to provide limited access to the ISO’s CIRA application to the CPUC. Discussion regarding this review are current underway. However, there is not currently a set timeline for completion.</p>
	SDG&E	<p>LRAs may have official RA program materials Please define the requirements of “official documents”.</p> <p>What are the RA program materials an official requirement for ISO to give due weight to the LRA’s RA program?</p>	<p>The ISO has clarified that it gives due weight generally to LRA in in evaluating whether jurisdictional load serving entities meet Resource</p>

			Adequacy compliance obligations
	SDG&E	<p>ISO standard LRA configuration template</p> <p>ISO identified several elements that would roll over annually. However, the configuration template does not include the identified elements for LRAs to provide individual LSE information. It is unclear how LRAs would provide the LSE requirements data to the ISO in a standard format. It is unclear how and when ISO would update the standard template to include updated LRA RA program rules. It seems that ISO would be in the best position to fill out the LRA's standard template for the LRA to approve.</p>	The ISO has posted a copy of the spreadsheet that would be used to help clarify the manner in which the ISO would receive the requested information.
2. Flexible Capacity Substitution For Planned Outages	CDWR	Planned Outage "Replacement" Capacity would be a better term than "substitute." CAISO has often used the word "replacement" for planned outages while using "substitute" for forced outages.	To avoid confusion, the ISO will move away from the use of substitution and replacement to differentiate between the type outage. Instead, the ISO will use either replacement or substitution, but will identify the outage as planned or forced.
	CPUC	CPUC staff believe that if the resource meets the requirements (e.g., has indicated in the master file that it can perform two starts per day) and is able to meet the must-offer requirements, no further restrictions should be placed on the resource and the resource should qualify for any or all of the categories of flexibility that they would otherwise qualify, aside from use limitations.	The ISO modified its proposal from the initial "category-or-better" proposal to a proposal that is based on an affirmative attestation that the substituting capacity can meet the must offer obligation of the resource on outage for the duration of the outage. The ISO believes this allows for greater flexibility for providing substitute capacity

			for flexible capacity while maintaining the quality of capacity originally procured through the flexible capacity categories.
SCE	CAISO should explore the proposal to allow flexible capacity substitutions with resources that could satisfy the Must Offer Obligation and daily requirements of the resource on outage		The ISO modified its proposal from the initial “category-or-better” proposal to a proposal that is based on an affirmative attestation that the substituting capacity can meet the must offer obligation of the resource on outage for the duration of the outage. The ISO believes this allows for greater flexibility for providing substitute capacity for flexible capacity while maintaining the quality of capacity originally procured through the flexible capacity categories.
SDG&E	The existing tariff language allows resources to provide substitution for flexible resources on forced outage without regard to the quality. As long as the resource is able to meet the MOO, the substitute resource should be allowed to provide the same level of capacity. It could be reasoned that Category 2 or 3 resources may not be able to substitute for Category 1. However, Category 3 may be able to substitute for Category 2 resources because the MOO hours are similar. SDG&E believe ISO should not change its existing language for forced outage substitution to “same category or better”.		The ISO modified its proposal from the initial “category-or-better” proposal to a proposal that is based on an affirmative attestation that the substituting capacity can meet the must offer obligation of the resource on outage for the duration of the outage. The ISO believes this allows for greater flexibility for providing substitute capacity

3. Substitution for Local Capacity Resources			for flexible capacity while maintaining the quality of capacity originally procured through the flexible capacity categories.
	Six Cities	The Six Cities strongly oppose the ISO’s proposal to require that substitute capacity for Flexible RA capacity on outage be provided by a resource in the “same Category or better” as the resource on outage.	The ISO modified its proposal from the initial “category-or-better” proposal to a proposal that is based on an affirmative attestation that the substituting capacity can meet the must offer obligation of the resource on outage for the duration of the outage. The ISO believes this allows for greater flexibility for providing substitute capacity for flexible capacity while maintaining the quality of capacity originally procured through the flexible capacity categories.
	WPTF	WPTF requests clarification on the flexible planned outage rules and supports the flexible planned outage rules working in the same manner as the system planned outage rules.	The ISO has provided additional clarity
	CDWR	If a resource is designated simultaneously for local, flexible category 1, Category 2, Category 3, and system, how is the forced outage going to count? Is the system RA at the top or at bottom? And which needs to be substituted?	The rules for flexible capacity on forced outage were defined in RS11 and are not being changed as part of this initiative.
	CPUC	CPUC Staff is still considering how burdensome this would be for the LSEs and awaits further LSE comment and CAISO clarification on this proposal. Given that this has the potential for creating	The ISO appreciates the desire to maintain simplicity in LSE showings. However, the

		<p>complicated filings, CPUC Staff tends to think that Option 3 (CAISO discretion: Resource request the ISO to grant a waiver of the local-for-local substitution requirement) would be preferable.</p>	<p>simplicity of LSE showings must be balanced with an equitable solution for RA resources that located in local areas but are procured for system capacity. The ISO proposal in designed to create a more equitable solution were the replacement requirements mirror the capacity obligation for which they have been procured.</p>
	PG&E	<p>CAISO should not adopt a specific local capacity designation as it adds complexity without commensurate benefits</p>	<p>The ISO appreciates the desire to maintain simplicity in LSE showings. However, the simplicity of LSE showings must be balanced with an equitable solution for RA resources that located in local areas but are procured for system capacity. The ISO proposal in designed to create a more equitable solution were the replacement requirements mirror the capacity obligation for which they have been procured.</p>
	SCE	<p>SCE thinks option 4 is promising for local capacity substitution, but details need to be developed before the proposal can be supported and implemented. How will this change align with the CPUC process?</p> <p>How will a resource be treated when only part of its capacity is shown as local (and the rest as generic)?</p>	<p>The ISO proposal in designed to create a more equitable solution were the substitution requirements mirror the capacity obligation for which they have been procured. However, as noted by other</p>

		<p>How will local and generic capacity splits be treated when a resource goes on partial outage?</p>	<p>stakeholder (see CPUC and PG&E) there is an interest in maintaining simplicity in the RA showings. The ISO appreciates the desire to maintain simplicity in LSE showings. However, the simplicity of LSE showings must be balanced with an equitable solution for RA resources that located in local areas but are procured for system capacity. Therefore, the ISO is currently proposing that a resource that is listed as local for part of the capacity will be designated as local for the entire capacity of the resource. This proposal more closely aligns the substitution obligations without significantly complicating LSE RA showings. The ISO may explore additional options to bifurcate system and local RA showings to allow for partial local RA units in a future enhancement.</p>
	SDG&E	<p>SDG&E does not support ISO’s proposal for Local RA substitution. SDG&E believes the ISO’s Local RA proposal significantly blurs the lines between Local and System.</p>	<p>The ISO has attempted to add clarity to the proposal for forced outages and, after further review, has elected to remove the proposal for planned outages.</p>

	SDGE	SDG&E does not believe the existing planned outage substitution rules need to be changed. SDG&E does agree that the forced outage substitution rules can benefit from refinement. CAISO should consider SDG&E's forced outage substitution proposal because it is more consistent with ISO's current practices and treats all capacity the same.	The ISO appreciates the desire to maintain simplicity in LSE showings. However, the simplicity of LSE showings must be balanced with an equitable solution for RA resources that located in local areas but are procured for system capacity. The ISO proposal in designed to create a more equitable solution were the substitution requirements mirror the capacity obligation for which they have been procured.
	Six Cities	Based on the description in the Revised Straw Proposal, the ISO's recommended substitution rule for Local capacity that is shown for System RA appears to be fair.	The ISO has added additional clarity to this part of the proposal.
	WPTF	Is all local capacity or only local capacity that is indicated as local by the supplier is used in the monthly local collective deficiency check.	All local resources are used to assess a collective deficiency
	WPTF	WPTF requests additional details on the local RA planned substitution process. It is unclear whether the ISO has sufficient tariff authority and process in place to handle the approvals of local resource planned outages or not.	Additional details have been provided in the paper.
4. Change Management for Updated EFC	CDWR	Does the Use Limitation reached look at Annual Use limitation only? Or is it looking at monthly and daily use limit also? Is ISO contemplating use limit reached outage cards for monthly use limit and daily use limit also?	The ISO focus is on use-limitations that extend beyond the operating month. This proposal does not address monthly or daily use-limitations
	PG&E	PG&E would appreciate the CAISO exploring with the CPUC and other stakeholders the potential to set a deadline for final NQC and EFC lists.	The ISO relies on a collaboration with the CPUC to produce the NQC and EFC

			lists. The ISO will continue to explore options to improve this collaboration. However, any specific enhancements are beyond the scope of the current initiative
	Six Cities	The Six Cities suggest that the ISO publish the annual Net Qualifying Capacity (“NQC”) and Effective Flexible Capacity (“EFC”) lists by T-45D, where T is the deadline for submitting the annual RA showing. This will allow Scheduling Coordinators sufficient time to enter into capacity contracts where necessary.	The ISO continues to work collaboratively to publish NQC and EFC lists based on LRA QC lists. However, because the process relies on an exchange of information between the ISO and LRAs, it is not possible to establish a firm date for the publication of the NQC and EFC lists.
5. Applying RAIM to Masterfile Changes	CDWR	The proposal states, “Therefore, the ISO proposes to apply the RAIM to resources where Masterfile changes disqualify them from providing a flexible capacity category. Specifically, the ISO proposes to assess as unavailable under RAIM resources that change Masterfile parameters that lower the flexible capacity category eligibility to a category below the one for which it is shown. These resources may provide substitute capacity to avoid exposure to RAIM charges”. What will be the mechanism to submit substitution due to Masterfile changes?	The ISO has clarified that because a Masterfile change does not constitute an outage, a resource would not have the ability to provide substitute capacity and be subject to RAIM for any unfulfilled capacity requirements.
	CPUC	CPUC staff believes the RAIM provisions are reasonable, both as they apply to units that change their MasterFile information to impede the utilization of their EFC and for units that expend their use limitations before the end of their flexible must offer obligation commitment period. In addition, the process outlined to update the EFC midyear appears reasonable.	The ISO appreciates the support for this aspect of its proposal.
	SDG&E	SDG&E believes the ISO needs to be more specific regarding the limitations for each category. In ISO’s example, if the resource cannot start 60 times per month, it will not be able to be Category	The ISO has provided more clarity regarding the current tools for determining if a

		1. However the current tariff language allows resources with 30 starts per month to qualify if the minimum up and down times prohibit the resource from meeting the 60 start-ups per month requirement. It is unclear if these resources would be placed into Category 2. SDG&E would like ISO to provide a summary of how many MWs per category would be reclassified based on this proposal if it were implemented.	resource requires one or two starts per day to provide category 1 or 2 flexible capacity. Specifically, the ISO notes that a resource with a minimum down time of 12 hours or less must have at least two starts per day to qualify as a category 1 flexible capacity resource.
	SDG&E	SDG&E is also concerned about impacts from commitment cost enhancement phase 3. In CCE Phase 2, ISO changed the term Use-Limited Resources to Use-Limited Capacity. While the change was not approved by FERC, if ISO seeks to make the change as the result of CCE Phase 3, the new definition would have relevant impact on what is considered use-limitations for this categorization. ISO provides an example of a short start resource1 changing the daily starts from 2 to 1 which ISO would newly categorize Category 2. If the minimum down time and up time still fit within the 24 hours, it seems the resource will still fit within Tariff 40.10.3.2(a)(4)(ii) as a Category 1 resource.	The CCE3 Revised Straw Proposal proposes to re-define use-limited in terms of a resource rather than capacity.
	SDG&E	SDG&E again asks how a resource that has changed its Masterfile would provide substitute capacity if the resource is unable to create an outage ticket for the change. ISO did not provide any responses to this question in its revised straw proposal.	The ISO has clarified that because a Masterfile change does not constitute an outage, a resource would not have the ability to provide substitute capacity and be subject to RAAIM for any unfulfilled capacity requirements.
	WPTF	The ISO needs to be more specific regarding the limitations for each category. Current tariff language allows resources with 30 starts per month to qualify for flexible RA Category 1 if the minimum up and down times prohibit the resource from meeting the 60 start-ups per month requirement. WPTF seeks clarification	The ISO has provided more clarity regarding the current tools for determining if a resource requires one or two starts per day to provide

		<p>on whether these resources would be placed into Category 2 under the new proposal.</p>	<p>category 1 or 2 flexible capacity. Specifically, the ISO notes that a resource with a minimum down time of 12 hours or less must have at least two starts per day to qualify as a category 1 flexible capacity resource.</p>
<p>6. Applying RAAIM to Combination Flexible RA Resources</p>	<p>SDG&E</p>	<p>SDG&E believes the assessment of the combined resource should be based on the lesser of the two resources.</p>	<p>While the ISO agrees that using the lesser of the two resources would disincentivize leaning, the ISO believes it will not accurately reflect the combined resource’s contribution towards meeting the flexible capacity obligation. As such, the ISO will not adopt SDG&E’s proposal on this issue.</p>
	<p>SDG&E</p>	<p>SDG&E does not understand how a pseudo-resource would be created. Will Scheduling Coordinators be required to bid in the new pseudo-resource? Will a Masterfile need to be created? What other impacts will the pseudo-resource have? ISO should specify how the RAAIM charges/incentives would be paid out for the pseudo-resource.</p>	<p>As noted in the ISO’s proposal, the pseudo-resource will only be utilized for RAAIM availability calculations. The ISO merge the availability of the two resources in the combination in the settlements system for RAAIM calculations only. There will be NO other changes to the resources bidding and settlements.</p>
	<p>Six Cities</p>	<p>The Six Cities very much appreciate the ISO’s efforts to develop the “pseudo-resource” concept, and it appears to be preferable to the exemption approach suggested previously. The Cities request</p>	<p>The purpose of the pseudo resource is to assess all RAAIM availability</p>

additional explanation, however, as to the application of the pseudo-resource concept and have the following questions: Refer to link for detailed examples and questions <http://www.caiso.com/Documents/SixCitiesComments-ReliabilityServicesPhase2-RevisedStrawProposal.pdf>

payments/charges as though the combination resource is a single resource. Once the resource is submitted as a combination, the ISO would no longer look at the resources as A and/or B, but only as resource C (the pseudo-resource)

1a) Yes

1b) Resource A and B would be treated a single resource that had a 100 percent availability

2a) Assuming Resource B goes on outage during the days when Resource A is meeting the flexible capacity obligation, yes.

2b and c) All RAAIM settlements would be done using the pseudo resource. Thus the correct answer is that Resource C (the pseudo resource) would receive a less than 100 percent availability under RAAIM.

3a) Yes.

3b, c, and d) All RAAIM settlements would be done using the pseudo resource. Thus the correct answer is that Resource C (the pseudo resource) would receive a less

			than 100 percent availability under RAAIM.
7. Streamline Monthly RA Showing Process	Calpine	Calpine believes that just as the CAISO has proposed for substitution, it also should be possible to replace local resources sold as system RA with any resource, regardless of location. In its discussion of planned outages of local resources, the revised straw proposal notes, “If the resource is needed for local reliability and cannot defer the outage, it can provide replacement from another local capacity resource. This allows the resource to avoid taking a forced outage while also providing the ISO greater assurance that local reliability is not compromised by the outage.” This part of the proposal does not seem to differentiate between local resources that are sold as local RA capacity and local resources that are sold as system RA capacity.	This comment is unclear. The ISO asks that Calpine clarify in upcoming discussions regarding this proposal what Calpine is trying to convey in this comment.
	CDWR	The ISO is proposing to automatically roll LSEs RA showings from the annual showing into the monthly showings. CDWR does not object to this proposal, but recommends that CAISO consider how this proposal will interact with updates to forecasts from the CEC.	The ISO’s proposal to allow LSE RA showings to roll over from the year-ahead showing to the monthly showing is designed to help enhance the communications with LSEs and avoid penalties for failure to submit and RA showing. It is not designed to ensure LSEs RA plan is sufficient or does not need any changed based on other updates look a CEC forecast update.
	CDWR	CAISO’s proposal to allow separate local and system RA does not take into account resources in a local area that are procured for flexible RA. CAISO’s preferred option is to allow resources in a local area procured for system RA that go on forced outage to be replaced with another system resource. This provision should also apply to forced outages and planned outages if the local area resource is procured for flexible RA.	Flexible capacity is a system product. The ISO is not proposing any changes to the flexible capacity forced outage rules. Flexible capacity of planned or forced outage can

			be substituted with another system resource.
	SDG&E	<p>SDG&E appreciates ISO’s proposal to roll over the annual showings. However this is little benefit for several reasons.</p> <ul style="list-style-type: none"> i. ISO notes that LSEs may already submit their month ahead system RA showings for all 12 months as part of its year ahead RA showing. In fact, the CIRA tool is able to accept month ahead RA plans until 2030 at this time for every month. ii. ISO will only roll over the RA plans and not Supply Plans. Since RA capacity is defined as capacity listed on a Supply Plan, rolling over the RA plans provides little benefit because the LSE has no supply plan to indicate capacity is committed to the LSE’s requirements. iii. SDG&E believes the cost of implementing this proposal is not worth the marginal benefit. 	While LSEs may submit monthly showings along with their annual showings, the goal of this aspect of the initiative is to streamline the LSEs showing process and enhance communications with LSEs. The ISO’s proposal accomplishes both.
	Six Cities	The Six Cities request that the ISO allow the same rollover of annual plans into monthly plans for supply plans as well, subject to revisions to the monthly supply plans at the request of the appropriate Scheduling Coordinator.	Supply plans can be entered in advance. This still allows the SC of the resource to enter it year ahead, but ensures the SC for the resource has made an active decision to do so. While not the same rollover principle applied to LSEs, it does allow an LSE to include month ahead supply plans at the same time as the annual supply plans.
	Small POU Coalition	As expressed in comments at the October 14, 2015 workshop, the Small POU Coalition asks that the ISO further clarify in the draft final proposal that, because the monthly plans are rolled over	The ISO has made this clarification.

		from the annual plan, a monthly plan update is not missing or late information.	
Other	CPUC	CPUC Staff reiterate our request that seasonal requirements be considered in this initiative. While CAISO has indicated that this issue is out of scope, we request that this be explained in the draft final proposal that is presented to the Board so that the record is clear.	The ISO will include the CPUC's comments in the draft final proposal.
	Small POU Coalition	The Small POU Coalition also asks that the ISO provide a de minimis exception for procurement of RA.	This item is out of scope for this initiative, but the ISO will consider it in the scope of the FRACMOO2 initiative.
	Small POU Coalition	The Small POU Coalition thanks the ISO for its efforts thus far, but a greater description of the ISO's proposed notification improvements in RSI and related stakeholder processes (along with the associated timelines) would be appreciated.	The ISO's proposed notification improvements identified in the RSI2 proposal will come as the result of simply having RA showings that rollover. This means the ISO will have RA showings from LSEs to compare with supply plans from resources. Without the RA showing, there would be nothing to use to identify discrepancies. If discrepancies are identified, automated messages are sent out.

Appendix B: Standard Local Regulatory Authority Configuration Template

If your LRA RA program requires an annual evaluation, the ISO will need the following:

Question	Answer Format
Evaluations. Does your LRA RA Program require the following evaluation parameters?	
ANNUAL PLANNING RESERVE MARGIN: What Planning Reserve Margin do you use for the annual evaluation?	Each month for a full calendar year (%)
ANNUAL EVALUATION FACTOR: In your annual peak demand & reserve margin evaluation, what is your Evaluation Factor?	Each month for a full calendar year (%) (For example, if you require 90% of the normal peak demand and reserve margin requirement, then the Evaluation Factor is 90%)
ANNUAL INDIVIDUAL SYSTEM EVALUATION: In your annual evaluation, do you evaluate the individual LSE Peak Demand & Reserve Margin requirements in each of the following months?	Each month for a full calendar year (Y/N)
ANNUAL INDIVIDUAL LOCAL EVALUATION: In your annual evaluation, do you evaluate the individual LSE local capacity requirement in each of the following months?	Each month for a full calendar year (Y/N)
ANNUAL INDIVIDUAL LOCAL REQUIREMENTS: If you have a local requirement allocation that differs from the ISO allocation of local capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.	<p>Option 1: LSE – Compliance Year – Compliance Month (January-December) – TAC Area (PGE, SCE, SDG) – Local Requirement (MW)</p> <p>Option 2: If LRA RA program documentation relies on local allocation on a load share ratio basis: LSE – Compliance Year – Compliance Month – TAC Area (PGE, SCE, SDG) - Percentage of LRA Total Local Requirement (%)</p>
ANNUAL INDIVIDUAL FLEXIBLE EVALUATION: In your annual evaluation, do you evaluate the individual LSE flexible capacity requirement in each of the following months?	Each month for a full calendar year (Y/N)
ANNUAL INDIVIDUAL FLEXIBLE REQUIREMENTS: If you have a flexible requirement allocation that differs from the ISO allocation of flexible capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.	<p>Option 1: LSE – Compliance Year – Compliance Month - Total Flexible Capacity Need (MW) – Base Ramping Minimum (MW) – Peak Ramping Maximum (MW) – Super Peak Ramping Maximum (MW)</p> <p>Option 2:</p>

Question	Answer Format
	If LRA RA program documentation relies on flexible allocation on a load share ratio basis: $\frac{\text{LSE} - \text{Compliance Year} - \text{Compliance Month} - \text{Percentage of LRA Total Flexible Need (\%)}}{\text{LRA Total Flexible Need (\%)}}$
Credits. Does your LRA RA Program allow LSEs to use credits in your annual evaluation?	
<i>For the annual <u>peak demand and reserve margin</u> evaluation:</i>	
ANNUAL SYSTEM DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N)
ANNUAL SYSTEM DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the planning reserve margin to be added to the DR credit in the peak demand & reserve margin evaluation?	Full Calendar Year (Y/N)
ANNUAL SYSTEM RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N)
ANNUAL SYSTEM COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation mechanism capacity towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N)
ANNUAL SYSTEM LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N)
ANNUAL SYSTEM OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to count any other credits towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N)
<i>For the annual <u>local</u> evaluation:</i>	
ANNUAL LOCAL DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its local requirement?	Full Calendar Year (Y/N)
ANNUAL LOCAL DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the	Full Calendar Year (Y/N)

Question	Answer Format
planning reserve margin to be added to the DR credit in the local evaluation?	
ANNUAL LOCAL RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its local requirement?	Full Calendar Year (Y/N)
ANNUAL LOCAL COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation mechanism capacity towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N)
ANNUAL LOCAL LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its local requirement?	Full Calendar Year (Y/N)
ANNUAL LOCAL OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to count any other credits towards meeting its local requirement?	Full Calendar Year (Y/N)

If your LRA RA program requires a monthly evaluation, the ISO will need the following:

Question	Answer Format
Evaluations. Does your LRA RA Program require the following evaluation parameters?	
MONTHLY PLANNING RESERVE MARGIN: What planning reserve margin do you use for the monthly evaluation	Each month for a full calendar year (%)
MONTHLY EVALUATION FACTOR: In your monthly peak demand & reserve margin evaluation, what is your Evaluation Factor?	(%) (For example, if you require 90% of the normal peak demand and reserve margin requirement, then the Evaluation Factor is 90%)
MONTHLY INDIVIDUAL SYSTEM EVALUATION: In your monthly evaluation, do you evaluate the individual LSE Peak Demand & Reserve Margin requirements in each of the following months?	Each month for a full calendar year (Y/N)
MONTHLY INDIVIDUAL LOCAL EVALUATION: In your monthly evaluation, do you evaluate the individual LSE local capacity requirement in each of the following months?	Each month for a full calendar year (Y/N)
MONTHLY INDIVIDUAL LOCAL REQUIREMENTS: If you have a local requirement allocation that differs from the ISO allocation of local capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs	Option 1: LSE – Compliance Year – Compliance Month (January-December) – TAC Area (PGE, SCE, SDG) – Local Requirement (MW) Option 2:

<p>under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.</p>	<p>If LRA RA program documentation relies on local allocation on a load share ratio basis: LSE – Compliance Year – Compliance Month – TAC Area (PGE, SCE, SDG) - Percentage of LRA Total Local Requirement (%)</p>
<p>MONTHLY INDIVIDUAL FLEXIBLE EVALUATION: In your monthly evaluation, do you evaluate the individual LSE flexible capacity requirement in each of the following months?</p>	<p>Each month for a full calendar year (Y/N)</p>
<p>MONTHLY INDIVIDUAL FLEXIBLE REQUIREMENTS: If you have a flexible requirement allocation that differs from the ISO allocation of flexible capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.</p>	<p>Option 1: LSE – Total Flexible Capacity Need (MW) – Base Ramping Minimum (MW) – Peak Ramping Maximum (MW) – Super Peak Ramping Maximum (MW) Option 2: If LRA RA program documentation relies on flexible allocation on a load share ratio basis: LSE – Compliance Year – Compliance Month -Percentage of LRA Total Flexible Need (%)</p>
<p>Credits. Does your LRA RA Program allow LSEs to use credits in your monthly evaluation?</p>	
<p style="text-align: center;"><i>For the monthly <u>peak demand and reserve margin</u> evaluation:</i></p>	
<p>MONTHLY SYSTEM DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N)</p>
<p>MONTHLY SYSTEM DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the planning reserve margin to be added to the DR credit in the peak demand & reserve margin evaluation?</p>	<p>Each month for a full calendar year (Y/N)</p>
<p>MONTHLY SYSTEM RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N)</p>
<p>MONTHLY SYSTEM COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation mechanism capacity towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N)</p>
<p>MONTHLY SYSTEM LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N)</p>
<p>MONTHLY SYSTEM OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to</p>	<p>Each month for a full calendar year (Y/N)</p>

count any other credits towards meeting its peak demand & reserve margin requirement?	
<i>For the monthly <u>local</u> evaluation:</i>	
MONTHLY LOCAL DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its local requirement?	Each month for a full calendar year (Y/N)
MONTHLY LOCAL DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the planning reserve margin to be added to the DR credit in the local evaluation?	Each month for a full calendar year (Y/N)
MONTHLY LOCAL RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its local requirement?	Each month for a full calendar year (Y/N)
MONTHLY LOCAL COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation mechanism capacity towards meeting its local requirement?	Each month for a full calendar year (Y/N)
MONTHLY LOCAL LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its local requirement?	Each month for a full calendar year (Y/N)
MONTHLY LOCAL OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to count any other credits towards meeting its local requirement?	Each month for a full calendar year (Y/N)

Appendix C: ISO Default Standard Local Regulatory Authority Configuration Template

Default Annual Standard Local Regulatory Authority Configuration:

Question	Answer Format
<i>Evaluations.</i> Does your LRA RA Program require the following evaluation parameters?	
ANNUAL PLANNING RESERVE MARGIN: What Planning Reserve Margin do you use for the annual evaluation?	Each month for a full calendar year 15% all months
ANNUAL EVALUATION FACTOR: In your annual peak demand & reserve margin evaluation, what is your Evaluation Factor?	Each month for a full calendar year (%) (For example, if you require 90% of the normal peak demand and reserve margin requirement, then the Evaluation Factor is 90%) 100% all months
ANNUAL INDIVIDUAL SYSTEM EVALUATION: In your annual evaluation, do you evaluate the individual LSE Peak Demand & Reserve Margin requirements in each of the following months?	Each month for a full calendar year (Y/N) Y all months
ANNUAL INDIVIDUAL LOCAL EVALUATION: In your annual evaluation, do you evaluate the individual LSE local capacity requirement in each of the following months?	Each month for a full calendar year (Y/N) Y all months
ANNUAL INDIVIDUAL LOCAL REQUIREMENTS: If you have a local requirement allocation that differs from the ISO allocation of local capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.	LSE – Compliance Year – Compliance Month (January-December) – TAC Area (PGE, SCE, SDG) – Local Requirement (MW) As determined in LCTS
ANNUAL INDIVIDUAL FLEXIBLE EVALUATION: In your annual evaluation, do you evaluate the individual LSE flexible capacity requirement in each of the following months?	Each month for a full calendar year (Y/N) Y all months
ANNUAL INDIVIDUAL FLEXIBLE REQUIREMENTS: If you have a flexible requirement allocation that differs from the ISO allocation of flexible capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.	LSE – Total Flexible Capacity Need (MW) – Base Ramping Minimum (MW) – Peak Ramping Maximum (MW) – Super Peak Ramping Maximum (MW) As determined in flexible needs study
<i>Credits.</i> Does your LRA RA Program allow LSEs to use credits in your annual evaluation?	

Question	Answer Format
<i>For the annual <u>peak demand and reserve margin</u> evaluation:</i>	
ANNUAL SYSTEM DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N) N
ANNUAL SYSTEM DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the planning reserve margin to be added to the DR credit in the peak demand & reserve margin evaluation?	Full Calendar Year (Y/N) N/A
ANNUAL SYSTEM RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N) Y
ANNUAL SYSTEM COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation mechanism capacity towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N) N
ANNUAL SYSTEM LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N) N
ANNUAL SYSTEM OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to count any other credits towards meeting its peak demand & reserve margin requirement?	Full Calendar Year (Y/N) N
<i>For the annual <u>local</u> evaluation:</i>	
ANNUAL LOCAL DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its local requirement?	Full Calendar Year (Y/N) N
ANNUAL LOCAL DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the planning reserve margin to be added to the DR credit in the local evaluation?	Full Calendar Year (Y/N) N/A
ANNUAL LOCAL RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its local requirement?	Full Calendar Year (Y/N) Y
ANNUAL LOCAL COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation	Full Calendar Year (Y/N) N

Question	Answer Format
mechanism capacity towards meeting its peak demand & reserve margin requirement?	
ANNUAL LOCAL LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its local requirement?	Full Calendar Year (Y/N) N
ANNUAL LOCAL OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to count any other credits towards meeting its local requirement?	Full Calendar Year (Y/N) N

Default Monthly Standard Local Regulatory Authority Configuration:

Question	Answer Format
<i>Evaluations.</i> Does your LRA RA Program require the following evaluation parameters?	
MONTHLY PLANNING RESERVE MARGIN: What planning reserve margin do you use for the monthly evaluation	Each month for a full calendar year (%) 15% all months
MONTHLY EVALUATION FACTOR: In your monthly peak demand & reserve margin evaluation, what is your Evaluation Factor?	(%) (For example, if you require 90% of the normal peak demand and reserve margin requirement, then the Evaluation Factor is 90%) 100% all months
MONTHLY INDIVIDUAL SYSTEM EVALUATION: In your monthly evaluation, do you evaluate the individual LSE Peak Demand & Reserve Margin requirements in each of the following months?	Each month for a full calendar year (Y/N) Y all months
MONTHLY INDIVIDUAL LOCAL EVALUATION: In your monthly evaluation, do you evaluate the individual LSE local capacity requirement in each of the following months?	Each month for a full calendar year (Y/N) Y all months
MONTHLY INDIVIDUAL LOCAL REQUIREMENTS: If you have a local requirement allocation that differs from the ISO allocation of local capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.	LSE – Compliance Year – Compliance Month (January-December) – TAC Area (PGE, SCE, SDG) – Local Requirement (MW) As determined in the LCTS
MONTHLY INDIVIDUAL FLEXIBLE EVALUATION: In your monthly evaluation, do you evaluate the individual LSE flexible capacity requirement in each of the following months?	Each month for a full calendar year (Y/N) Y all months

<p>MONTHLY INDIVIDUAL FLEXIBLE REQUIREMENTS: If you have a flexible requirement allocation that differs from the ISO allocation of flexible capacity requirements for your jurisdiction LSEs, provide the following information for each LSE under your jurisdiction. The sum total requirements across all LSEs under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.</p>	<p>LSE – Total Flexible Capacity Need (MW) – Base Ramping Minimum (MW) – Peak Ramping Maximum (MW) – Super Peak Ramping Maximum (MW)</p> <p>As determined in flexible needs study</p>
<p>Credits. Does your LRA RA Program allow LSEs to use credits in your monthly evaluation?</p>	
<p><i>For the monthly <u>peak demand and reserve margin</u> evaluation:</i></p>	
<p>MONTHLY SYSTEM DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>
<p>MONTHLY SYSTEM DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the planning reserve margin to be added to the DR credit in the peak demand & reserve margin evaluation?</p>	<p>Each month for a full calendar year (Y/N) N/A</p>
<p>MONTHLY SYSTEM RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N) Y</p>
<p>MONTHLY SYSTEM COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation mechanism capacity towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>
<p>MONTHLY SYSTEM LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>
<p>MONTHLY SYSTEM OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to count any other credits towards meeting its peak demand & reserve margin requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>
<p><i>For the monthly <u>local</u> evaluation:</i></p>	
<p>MONTHLY LOCAL DEMAND RESPONSE ELIGIBLE: Does your LRA RA Program allow load serving entities to count demand response towards meeting its local requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>
<p>MONTHLY LOCAL DEMAND RESPONSE ADJUSTMENT: Does your LRA RA Program allow the planning reserve margin to be added to the DR credit in the local evaluation?</p>	<p>Each month for a full calendar year (Y/N) N/A</p>

<p>MONTHLY LOCAL RELIABILITY MUST RUN ELIGIBLE: Does your LRA RA Program allow load serving entities to count ISO-procured reliability must run capacity towards meeting its local requirement?</p>	<p>Each month for a full calendar year (Y/N) Y</p>
<p>MONTHLY LOCAL COST ALLOCATION MECHANISM ELIGIBLE: Does your LRA RA Program allow load serving entities to count cost allocation mechanism capacity towards meeting its local requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>
<p>MONTHLY LOCAL LIQUIDATED DAMAGES ELIGIBLE: Does your LRA RA Program allow load serving entities to count liquidated damages contracts towards meeting its local requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>
<p>MONTHLY LOCAL OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to count any other credits towards meeting its local requirement?</p>	<p>Each month for a full calendar year (Y/N) N</p>

Appendix D: Timeline for substitute capacity for flexible capacity on planned outage

