Reliability Services Initiative – Phase 2:

Revised Draft Final Proposal

July 7, 2016

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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 that are necessary to effectively administer the RA program. In January of 2016, the California ISO published the draft final proposal indicating its intent to present the proposal at the June 2016 Board of Governors meeting. The ISO subsequently deferred the initiative to reassess the proposal. The ISO has made several changes to the scope of the initiative and intends to present the proposal at the August 2016 Board of Governors meeting. Listed below are the items that the ISO has included in the scope of the draft final proposal. As discussed below, the ISO proposes to change items 1 and 4 from what was presented in the draft final proposal, and has added a new item 7.

1) Clarify Local Regulatory Authority interaction and process alignment – Given the current direction of policy development in the Regional RA initiative, where detailed information on the specific elements of each Local Regulatory Authority's (LRA) RA program may not be needed, the ISO will not continue to pursue development of a template that would be provided to the ISO with detailed information about the LRA's RA program.

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 RA resources. Further, the ISO proposes that the substitute capacity must be capable of meeting the must-offer obligation for the duration of the resource's outage.

3) Separate local and system RA for purpose of forced outage substitution –The ISO proposes to allow system capacity to substitute for capacity located in a local area that is procured as system RA and goes on a forced outage. The ISO will develop RA showings and supply plans that specifically designate the capacity that is used to meet local capacity requirements. Any capacity included on local RA showings will also count towards meeting the Load Serving Entity's (LSE) system RA requirement.

4) Process to update Effective Flexible Capacity (EFC) list during the year – The ISO will clarify the process by which a resource may change its EFC through the course of the RA year.

5) Address the RAAIM exemption currently in place for combined flexible capacity resources – Currently, combination flexible capacity resources are exempt from the Resource Adequacy Availability Incentive Mechanism (RAAIM). The ISO proposes to eliminate this exemption. In order to apply RAAIM to combination flexible capacity resources, the ISO proposes to create a quasi-resource[1] for the two resources in the

[1] In the second revised straw proposal, the ISO referred to this concept as a pseudo resource. However, to avoid potential confusion with pseudo-tied resources, the ISO will use the term quasi-resource to describe this concept.

combination. This quasi-resource would be used only for purposes of calculating RAAIM charges or payments and has no other implications on the combination.

6) Streamlining monthly RA showings – The ISO is no longer proposing to automatically roll LSE's annual RA showings into the monthly showings. The ISO has built in a reporting tool in the California ISO Interface for Resource Adequacy (CIRA) to track LSEs that have not submitted their monthly RA showing, as well developed a communication process to ensure that all LSEs, regardless of size, are notified when an RA showing has not been submitted.

7) RA showing requirements for small LSEs – The ISO has transferred this item from the FRACMOO Phase 2 initiative. The ISO proposes to allow LSEs with a forecasted RA need of one MW or less in a given month to show zero MW of capacity on their RA showings for that month. The one-MW allowance would apply to each specific RA requirement – system, local (by TAC), or flexible. The LSE will not be exempted from annual or monthly RA showings unless its metered peak demand for the previous year was less than one MW. The ISO is also proposing a flexible capacity showing exemption for all LSEs with an annual maximum contribution to the three hour net load ramp of less than one MW.

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.

1. The ISO is no longer proposing to develop a default template detailing the information it needs regarding the LRA's RA program.
2. The ISO is no longer proposing to automatically roll an LSE's RA showings from the annual into the monthly showings. Instead, the ISO has developed a tool to monitor the submission of RA showings and developed a process to quickly contact LSEs if a RA showing is not received by the due date. These two changes should address the concern of potential, large, late information penalties being assesses for late RA showings where the LSE may not have otherwise been aware of the missing submittal.
3. The ISO proposes to allow LSEs with a forecasted RA requirement of one MW or less in a given month to show zero MW of capacity on their RA showings for that month. The one MW allowance would apply to each specific RA requirement: system, local (by TAC), or flexible.

2.2 Stakeholder Comments

Stakeholder comments on the draft final proposal were generally supportive of the ISO's proposed changes to the ISO tariff. However, some stakeholders seek additional detail about the ISO's proposal with respect to LRA process alignment, local RA, and outage rules. Also, there were additional comments on other topics. A matrix of stakeholder written comments and the ISO's written responses is included in Appendix A. The following provides an overview of these comments and the ISO's responses; the ISO's detailed responses to each stakeholder's comments are provided in Appendix A.

(1) Clarify LRA interaction and process alignment – Southern California Edison (SCE) notes the benefits from the alignment between ISO and LRAs. San Diego Gas & Electric (SDG&E) suggests the ISO establish and add process and timeline to renew and update the template to accommodate LRA changes. The California Public Utilities Commission (CPUC) opposes any potential tariff changes and changes to the proposal where default requirements only apply if CPUC does not submit information as this does not address concerns with the de facto requirement placed on the CPUC. In this revised draft final proposal, the ISO is no longer proposing a default template due to the direction that policy development is going in the Regional RA initiative, where detailed information on the specific elements of each LRA's RA program may not be needed.

(2) Substitution for flexible capacity resources on planned outage – Six Cities supports the ISO's proposal for allowing substitution for flex capacity resources on planned outage.

(3) Separate local and system RA for purpose of forced outage substitution – SCE, NRG, Six Cities and Calpine support this element of the proposal, but request some clarification on implementation. Silicon Valley Power (SVP) suggests that the ISO refrain from creating separate templates to report system and local LRA showings. SDG&E disagrees with the ISO's proposal to unbundle local and system RA attributes. Pacific Gas & Electric (PG&E) is concerned about adding RA showings due to increased complexity, costs, and implementation difficulties. PG&E also points out inconsistencies between opportunities and cost for suppliers to substitute for local RA forced outages. The ISO understands the various concerns, but believes that focusing on whole unit local designations could create incentives that would inhibit a resource's ability to procure substitute local capacity. The ISO believes that requiring specific local RA capacity showings is the best solution and provides further details in section 4.3 below.

(4) Process to update EFC list during the year – SCE has no issues with this element of the proposal. SDG&E suggests using the same process in the CIRA tool for EFC updates that the ISO uses for NQC updates. Six Cities recommends that the ISO target publication of revised NQC and EFC lists by T-45 days while PG&E suggested collaboratively setting the deadline. The ISO appreciates the variety of suggestions to improving the process.

(5) Address the RAAIM exemption currently in place for combined flexible capacity resources – SDG&E suggests that the ISO monitor and report the use of short-term use limitation and monitor if a poor performing resource of the combined resource

is not being penalized. Six Cities supports applying RAAIM to combination flexible capacity resources. The ISO appreciates SDG&E's comment and has taken it into consideration. The ISO has specifically addressed SDG&E's concerns in greater detail in the stakeholder comments matrix below.

(6) Streamlining monthly RA showings – NRG believes that suppliers should be allowed to have their plans be automatically rolled over from the annual to monthly RA plans. SVP suggests automatically rolling over annual resource supply plans into the monthly showings, as well as annual RA showings. Six Cities supports the ISO's proposal to automatically roll all RA showings made in annual plans into monthly showings for all LSEs. However, the ISO is no longer proposing to roll over annual RA showings into monthly RA showings.

(7) RA Showing Requirements for Small LSEs – These comments were transferred from the Flexible Resource Adequacy Criteria and Must Offer Obligation phase 2 (FRACMOO). NCPA, NRG, Six Cities and Small POU Coalition support this element of the proposal. PG&E does not support different RA showing requirements for small LSEs. SDG&E wants to understand the magnitude of small LSE requirements. The ISO provides additional information in section 4.7 below in response to these comments.

3. Plan for Stakeholder engagement

The ISO is targeting the August 31 – September 1, 2016 ISO Board of Governors meeting for consideration of the proposal for this stakeholder initiative. The current schedule for RSI2 is shown below.

Date	Milestone
July 7, 2016	Revised draft final proposal posted
July 14, 2016	Stakeholder call on revised draft final proposal
July 21, 2016	Stakeholder comments due on revised draft final proposal
Aug 31-Sep 1, 2016	Board of Governors meeting

4. Revised Draft Final Proposal

4.1 LRA and LSE interactions and process alignment

In its initial proposal, the ISO proposed to standardize the reporting of RA program requirements to facilitate LRAs and LSEs providing the ISO the details of their specific RA program. The ISO is no longer proposing to develop a template that would require LRAs and LSEs to provide the ISO details of their RA program. Although certain stakeholders support a template, the ISO has concluded that, given the current direction of policy development in the Regional RA initiative, where detailed information on the specific elements of each LRA's RA program may not be needed, the

ISO will not continue to pursue development of a template that would be provided to the ISO with detailed information about the LRA's RA program.

4.2 Planned outage substitution rules for Flexible Capacity resources

Substitution rules for flexible capacity resources on a planned outage

The ISO will allow the Scheduling Coordinator (SC) to provide substitute capacity for planned outages of flexible RA capacity. Any substitute capacity must comply with the flexible RA category must-offer requirements of the resource on outage. The ISO's intent is to ensure that any substitute capacity is able to provide a comparable quality of flexible capacity (*i.e.* similar flexible capacity must offer obligation) to the resource going on a planned outage.

The ISO notes that Section 40.10.6 of the ISO tariff defines the must-offer obligations of the flexible capacity resources shown in specific flexible capacity categories. As such, any resource providing substitute flexible capacity for a planned outage, must provide confirmation that the substitute capacity has sufficient starts and run hours to meet the flexible capacity obligations of the resource or be assessed under RAAIM for that flexible capacity category. This demonstration must be made at the time the request for the planned outage is made or the ISO will reject the substitution and deny the planned outage request. The ISO proposes to use the same confirmation process for substitute flexible capacity for a forced outage. For example, if a Category 1 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.
3) The ISO will evaluate all flexible capacity from the resource according to the availability rules for the category 1 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 the substitute capacity must comply with the higher category must-offer requirements for the entire resource's committed RA capacity. For example, a Category 1 flexible 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, the Federal Energy Regulatory Commission (FERC) found this approach to be just and reasonable because it reduces the complexity in implementation 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. Specifically, the ISO stated in its tariff amendment for RSI1a:

> [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.[2]

In response, FERC stated that it "believe[s] the complexity of [the] alternatives would undermine the benefits of CAISO's proposal."[3] Similar complexity results if the ISO is forced to track outages and determine substitution obligations for resources shown in multiple flexible capacity resources.

It is possible that multiple resources with varying categories can provide substitute flexible capacity at different but overlapping times during a month. For example, as shown in Table 1 below, resource A is shown as Category 1 on RA showings as a partial RA unit and is used as a substitute unit to mitigate the impact of forced outages on three other RA units. Resource A is used in different categories as a substituting unit, but the ISO would only consider the highest quality category from a must offer and RAAIM perspective. Specifically, resource A has an obligation to serve as a Category 1 on day 2 because it was used as a Category 1 for sub 2.

Table 1: Resource A's RA category obligation

	Day 1	Day 2	Day 3	Day 4	Day 5
Res A on RA showing	2	2	2	2	2
Res A used for Sub 1	2	2			
Res A used for Sub 2		1	1		
Res A used for Sub 3			3	3	3
Obligation	2	1	1	2	2

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

[3] 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

An SC may use a substitute resource in multiple categories for a day, but the ISO will assess the resources based on the highest quality category for its must offer obligation and RAAIM.

The ISO will allow a SC 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 SC to indicate a substitute value. For example, resource A can indicate that 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 resources on planned outages. Specifically, the ISO will utilize the same timeline as in Appendix D of the RSI1 proposal[4], which will be in effect in 2017 that will change both the timeline and responsibilities for entities. This timeline is included in Appendix B of this document.

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

Currently, RA resources in local capacity areas that go on a forced outage must provide substitute capacity that is also located in a local capacity area or be subject to availability charges. Some stakeholders 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

[4] http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=B7589653-DF76-4D38-B471-3DEB44B7408F

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.

Designating local versus system capacity and substitute capacity obligations

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).[5] **Based on that assessment, the ISO proposed to incorporate 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**. Stakeholders appear to agree with this assessment.[6] In the revised straw proposal, the ISO proposed to limit local designations to whole resources. However, Calpine and NRG raised additional questions regarding the potential benefits of partial resource designations (*i.e.*, part of a resource could be designated for local and another part could designated as system). The ISO believes it is both beneficial and feasible to allow specified MWs of capacity, instead of whole resources, to be local RA.

The ISO believes that focusing on whole unit local designations could create incentives that would inhibit a resource's ability to procure substitute local capacity. By definition, there are only a limited number of resources in a local area that can provide substitute capacity when another resource goes on outage. If one of those resources is procured as a system resource, it may be unwilling to provide local capacity substitution if it would be required to convert the entire resource into a local resource. Doing so, increases the potential substitution obligation for the new resource. This is particularly true if the quantity to be substituted is small, relative to the amount of system capacity the resource has sold. Therefore, to facilitate more efficient substitution practices, the ISO proposes to allow MWs of capacity, not whole resources, to be local capacity.

The ISO proposes to create RA showings and supply plans for both the annual and month-ahead RA showings that indicate all the MWs of capacity that are providing local RA capacity. The ISO would like to clarify that the designation of local and system MW capacity will not require a separate template for RA showings and supply plans but will be built into the existing template. The ISO will use this new RA showing to determine whether an LSE is sufficient in meeting its local RA obligation. Supply plans will also include a showing that identifies the specific MW quantity of local RA capacity the resource is providing. The ISO will

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

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

validate local RA showings to verify that the SCs for resources and LSEs have accounted for capacity comparably on both showings. If there is a discrepancy between the RA showing and supply plan, the ISO will notify both parties. If the discrepancy remains unresolved, the ISO will maintain its current practice of defaulting to the supply plan, but notifying both parties of the discrepancy.

All MWs of capacity on local showings and supply plans will automatically count towards the LSE's system RA requirement. Therefore, there is no need to include a MW of capacity designated as local RA on the system RA showing or supply plan. Further, the sum of both the system RA plus the local RA may not exceed the NQC MW value for a resource.

This proposal will minimize the complexity associated with local capacity planned and forced outage substitution rules. The ISO is not proposing changes to the timing of planned or forced outage substitution.[7] However, the ISO must clarify how local RA resources can provide substitute capacity. Resources identified on both a system and local RA showing that are derated first have a substitution obligation for any system capacity unless the derate impacts the resource's ability to meet its local capacity obligation. Only to the extent the derate impacts the resource's ability to meet its local capacity obligation, will the SC have to substitute local capacity to avoid RAAIM non-availability charges. For example, if a 100 MW resource sells 60 MW local RA and 40 MW of system RA but is derated from 100 MW to 80 MW, then the resource would be required to provide 20 MW of system RA to avoid RAAIM charges (Figure 1). However, if the same resource is derated to 50 MW, then it would have to provide 10 MW of local substitute capacity and 40 MW of system capacity to avoid RAAIM charges (Figure 2).[8]

[7] As noted on p. 24 of the second revised straw proposal, the ISO is not proposing any changes to the planned outage process http://www.caiso.com/Documents/SecondRevisedStrawProposal-ReliabilityServicesPhase2.pdf

[8] Any CPM designated capacity will have a substitution obligation comparable to the deficiency that lead to the CPM designation.

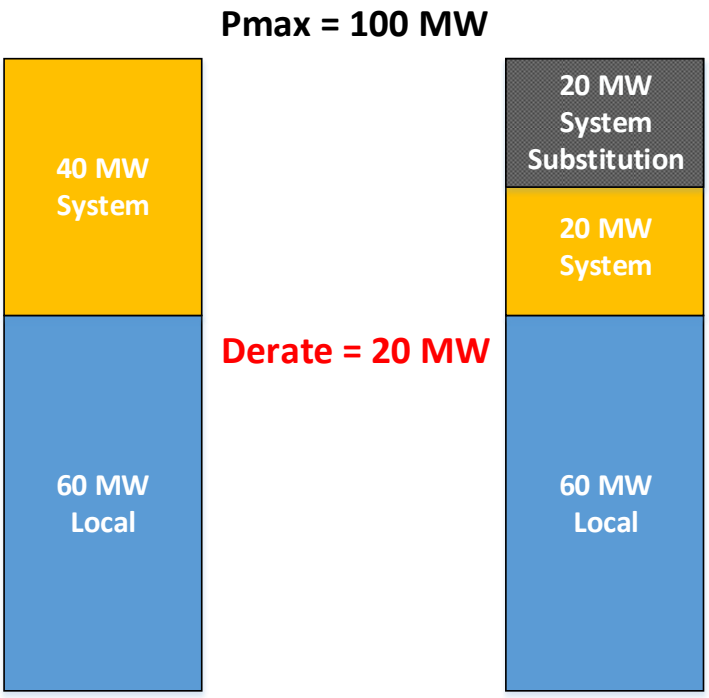


Figure 1: Substitution required for a Resource with a 20 MW derate to avoid RAAIM charges

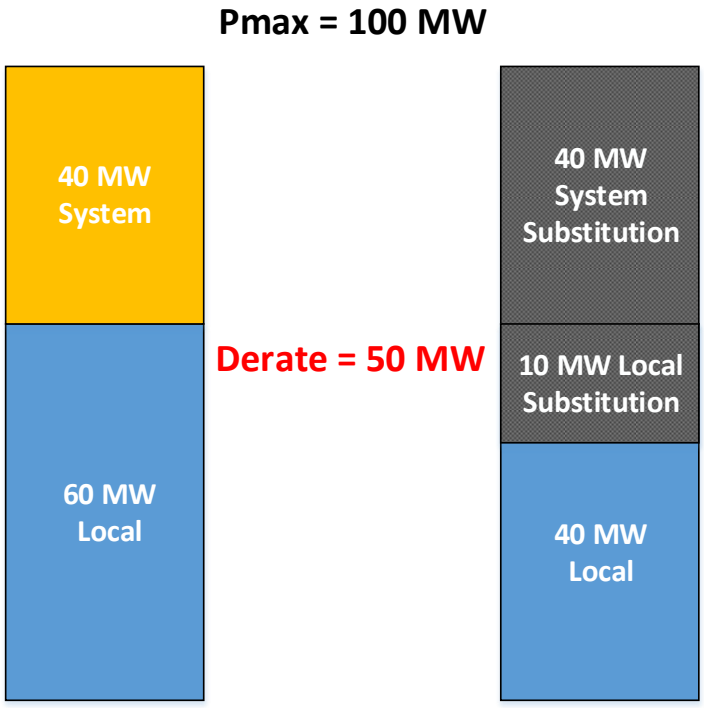


Figure 2: Substitution required for a Resource with a 50 MW derate to avoid RAAIM charges

The SC for the resource shown as local capacity going on outage would submit a substitution designating the capacity of another qualified resource as substitute capacity. If the substitute resource also has system capacity, and the substitution is incremental to that capacity, then the substitution will not impact the existing system capacity. The additional local substitute capacity will be added to the system capacity. For example, if a 100 MW resource located in a local area has sold 60 MW of system capacity and offers to provide an additional 25 MW of local capacity due to a forced outage of a local resource, then the resource would be subject to the must-offer obligations for 85 MW (60 MW plus 25 MW). Because this substitution is incremental, it fulfills both the system and local obligation of the capacity on outage.

The ISO will only use the designated local capacity, not the total capacity of the resource, to determine whether an LSE has shown sufficient local capacity to meet its local capacity requirements. This ensures that LSEs cannot procure small amounts of local RA from a resource, expecting to lean on the remainder of the resource's capacity, which may not have been procured or may have been procured as system capacity, to count towards the LSE's local capacity requirement. 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, the ISO will not allocate CPM costs caused by an individual local deficiency. Although the ISO will assess the adequacy of individual LSEs using only designated resources, the ISO will still determine collective deficiencies in a local area using all RA resource that impact the given local area, as is done today. This is necessary because of the need to accurately model the topology of the local area and capture all resources impact (positive or negative) on the local area.[9]

The ISO believes that requiring specific local RA capacity showings is the best solution and is a pareto[10] improvement relative to the status quo. Specifically, this option provides a mechanism by which LSEs can show the ISO the capacity it is relying on to meet its local capacity obligation. Further, for specific capacity procured to provide system or local capacity, there is a close alignment in the substitute capacity cost risk with the type of capacity for which it has been procured. Lastly, the obligations for substitute capacity are clearly defined, allowing LSEs to show all local capacity that have been procured.

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

[9] The ISO is not proposing any modifications to the backstop competitive solicitation process.
[10] A pareto improvement is a change that benefit some parties while leaving no other party worse off because of the change.

In the FRACMOO Phase 1 stakeholder initiative, the ISO established the methodology for calculating a resource's EFC. Specifically, the ISO calculates 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 when a new resource comes online and a resource's NQC increases. Several SCs have already contacted the ISO to change their EFC mid-year. The ISO will update a resource's EFC only upon request from the SC for the resource. The ISO will not automatically undertake these updates. If a non-dispatchable resource becomes dispatchable, the SC for that resource must request that the ISO review the EFC for the resource after the change takes effect. This also covers changes to the NQC of a resource. The SC for a resource must request that the ISO review the EFC value either at the same time or after the SC submits the request to change the NQC value.

Determining flexible capacity categories

In RSI 1, the ISO established a process by which SCs for use-limited resources provide the resources' use-limitations to the ISO. The use-limitations captured through this submission include any applicable monthly start-limitation for a resource. The ISO utilizes this data to determine whether a resource qualifies to provide Base, Peak, or Super-Peak flexible capacity. Specifically, the ISO utilizes 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, 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. Using 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 properly identify the resource's eligibility to provide Super-Peak flexible capacity.

4.5 Combination Flexible Capacity Resources RAAIM exemptions

After FERC conditionally approved the ISO's FRACMOO Phase 1 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.[11] Originally, the ISO had proposed that both resources in 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."[12] 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.

The ISO proposes to eliminate this exemption and develop a calculation that treats both resources in the combination as a single resource solely for the purposes of determining RAAIM charges or payments.

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 only needs to assess the availability of a single resource over the duration of a day. **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:

[11] 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 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.

[12] See ISO's April 10, 2015 filing in ER14-2574 at p. 3.

Resource	Pmax	System RA	Flexible RA[13]
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 Resource 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. 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 quasi-resource for the two resources in the combination. This quasi-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 quasi-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

[13] 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.

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 using the quasi-resource, the RAAIM assessment would look at the compliance of each resource separately. For a 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 it 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:

Table 2 Availability of resources

Resource	Flexible Capacity Availability	Incremental System Capacity Availability[14]	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 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 quasi-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:

[14] 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.

Table 3: RAAIM requirements of the combo flex capacity resource

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

Once the ISO creates this quasi-resource, using the daily available flexible capacity calculation described above, the ISO will be able to apply the RAAIM calculation in the same manner as it does is 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.

4.6 Streamlining annual and monthly RA processes

Each year, LSEs are required to submit year ahead RA showings. Monthly RA plans are currently due at t-45 days before the operating month. An LSE is currently allowed to submit monthly showings at the same time as when they submit their annual showings. Any monthly RA showing that is submitted after t-45 days will incur a penalty of $500 per day until the RA plan is submitted.[15]

The Small POU Coalition requested the ISO look at the process and penalties for only small POUs. The ISO is not proposing any changes to the existing penalty structure based on LSE size, since trying to create such delineation could be viewed as arbitrary, and, further, is not necessary. However, the ISO has built a reporting tool in CIRA that provides a list of LSEs that have not submitted their RA showings at t-44, a day after the RA showings deadline. Additionally, ISO client service representatives have developed a process to notify an LSE, regardless of size, that has not submitted an RA showing. The ISO believes that the tracking tool and notification process, which is already in place, will ensure that all LSEs are made aware of the failure to submit a plan and mitigates the concern of potential, large, late information penalties being assessed for late RA showings.

4.7 Resource adequacy showing requirements for small LSEs

The ISO has transferred consideration of this issue from the FRACMOO Phase 2 initiative to this initiative. The ISO tariff provides an exemption from RA showings for small LSEs if measured

[15] https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Reliability%20Requirements

demand for the previous year was less than one MW.[16] This exemption was based on the challenge and cost associated with trying to procure less than a MW of capacity. Although this waiver provides some relief for small LSEs, it still leaves many LSEs with off-peak monthly RA requirements of less than one MW that must be fulfilled. The ISO proposes to clarify the RA showing requirements for these instances.

The ISO proposes to allow an LSE with a measured peak demand of greater than one MW but with a monthly RA requirement for a specific month and a specific RA product (*i.e.* system, local, or flexible capacity) less than one MW to be exempted from submitting a monthly RA showing for that RA product. The ISO is not saying that the LSE would not have an RA requirement. For example, a small LSE may have a peak load of 2.5 MW in June, but only .75 in January through May. This LSE would not submit an RA showing for January through May, but would have to provide a showing of 2.5 MW for June. **Although the ISO will not require small LSEs to submit a monthly RA showing for the months in which the requirement is less than one MW, the ISO is not proposing to exempt them from potential backstop procurement costs.** If a small LSE with a RA requirement less than one MW does not show RA capacity for a specific month, the ISO will not penalize the LSE for the failure to submit a monthly RA plan. However, the ISO will notify them of the RA deficiency and will provide them with the opportunity to cure the deficiency, just as is done with large LSEs today. If the LSE does not cure the deficiency and the ISO exercises its backstop authority, the LSE will be subject to cost allocation for capacity procured.

RA showings for local and flexible capacity require additional clarity. The ISO proposes to allow an LSE to not submit a monthly RA showing for its local capacity requirement if the LSE's local requirement is less than one MW in a Transmission Access Charge (TAC) area. This means the LSE would not be required to designate local capacity in that TAC area. As an example, if an LSE has a local requirement in PG&E TAC of 0.75 MW and a 1.25 MW in SCE TAC, then the LSE would be required to designate 1.25 MW of local in SCE TAC, but would not be required to designate any local RA in PG&E TAC.

Further, unlike system RA, there is no exemption for LSEs as it pertains to flexible capacity requirements. Therefore, the ISO proposes to exempt LSEs with the largest forecasted contribution to the maximum three hour net load ramp of less than one MW from making a flexible RA showing. It is important to note that this exemption is based on the contribution to the three hour net load ramp and not the total flexible RA requirement. This is due to the fact that part of the flexible capacity need is caused by the potential overlap between flexible capacity and the need for contingency reserves. The ISO's proposed exemption is based on the driver of the need (*i.e.* the three hour net-load ramp), and should therefore not consider the

[16] In 2016, the ISO has identified that there is only one LSE that is exempted under this provision.

potential for overlap. **The ISO also proposes that an LSE be permitted to show zero MW for flexible RA in a particular month only if the *total* flexible RA requirement for the LSE is less than one MW**. **The LSE may not show zero if only a specific category of flexible capacity is less than one MW**. As another example, a small LSE in May with a peak load forecast of 6 MW, but a flexible capacity requirement of 0.75 MW, would have to provide a system RA showing for the 6 MW, but would not be required to provide a flexible capacity showing for that month.

5. Next Steps

The ISO will host a stakeholder call on July 14, 2016 to discuss the contents of this draft final proposal. Stakeholders are welcome to submit written comments by July 21, 2016 to initiativecomments@caiso.com. Stakeholders should submit their written comments 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 response matrix

This appendix contains written stakeholder comments that were received on February 16, 2016 on the Reliability Services Initiative, Phase 2 (RSI2) Draft Final Proposal that was posted on January 26, 2016.

The table below lists the acronyms used for the names of the stakeholders that submitted written comments.

Acronym	Name of Stakeholder
CPUC	California Public Utilities Commission
NRG	NRG Energy, Incorporated
PG&E	Pacific Gas & Electric
SCE	Southern California Edison
SDG&E	San Diego Gas & Electric
SVP	Silicon Valley Power

The matrix on the following page provides the written stakeholder comments, as well as California ISO (ISO) responses to those comments.

Topic	Stakeholder	Stakeholder Comment	ISO Response
1 **Clarify LRA Interaction & Process Alignment**	SCE	SCE can appreciate the benefit of having process alignment between the CAISO and LRAs. SCE is supportive of a process alignment if the CAISO and CPUC can agree on it.	The ISO will no longer pursue development of an RA template as it may not be necessary under a Regional RA construct.
	SDG&E	ISO should establish an additional process and timeline to review and update the template annually to accommodate LRA changes 90 days prior to the due dates. This annual process will ensure ISO provides the default template to LRAs for review and request necessary changes for additional components to the LRA's RA program. Without the ability to update the template may cause ISO not receiving proper updates to LRA's programs in a timely manner. SDG&E would like ISO to define its term of "proper" LRA documentation. What are the required documents necessary to ensure LRAs are allowed to fill out the template?	See the ISO's response above to SCE's comment above.
	CPUC	CPUC Staff wishes to reiterate our opposition to any tariff changes that imply that Default RA requirements would be applied to LSEs that are regulated by the CPUC. Such a provision would be in conflict with state law that specifies that the CPUC regulates non-municipal LSEs in California and sets their RA requirements. Changing the proposal so that the default requirements would only apply if the CPUC does not submit the information on the conditions proposed by CAISO does not alleviate our concerns with this de facto requirement placed on the CPUC. CAISO's proposal does not explain why acquiring this information through the LRA submission via a CAISO developed template is necessary for CAISO to fulfill its tariff obligations.	See the ISO's response above to SCE's comment above
2 **Substitution for Flexible Capacity Resources on Planned Outage**	Six Cities	The Six Cities support the ISO's determination to allow substitution for flexible capacity on planned outage based on an affirmative attestation that the substitute capacity can meet the must offer obligation of the resource on outage for the duration of the outage.	The ISO appreciates Six Cities' comments in support of this element of the proposal.
3	SCE	While SCE still has concerns regarding the numerous implementation details that will need to be developed for this principle, SCE does not object to the policy developed within this initiative. It seems reasonable to begin separate system and local RA showings.	The ISO appreciates SCE's feedback on this element of the proposal and the need to

Separate Local & System RA for Purpose of Forced Outage Substitution			work on the various implementation details.
	NRG	NRG strongly supports the CAISO's proposal to allow for specified MW of capacity, instead of requiring whole resources, to be local RA capacity. NRG also supports the CAISO's proposal that the replacement obligation attaches first to system capacity, and that sellers will have to replace with local capacity only to the extent the outage or de-rate affects the resource's local capacity obligation. This proposal appropriately recognizes the increased cost and risk of having to replace with local capacity. Specifically, as part of this initiative, the CAISO should modify its tariff to grant a CPM designation to CPM capacity (1) that the CAISO relies on to allow an RA unit to take a planned outage, or (2) for which the CAISO denies a planned outage request.	The ISO appreciates NRG's support for creating separate local and system RA. However, the ISO will not propose tariff modification to grant a CPM, the ISO does not identify or rely on a single resource to allow an RA unit to take a planned outage. The ISO relies on the pool of resources not on outage to determine if a resource can take a planned outage.
	SVP	SVP requests that the CAISO refrain from creating separate templates to report system and local RA showings. The current template should be revised to have another column (i.e. "Is Local – Y/N") added to allow entities to specify which transaction is System RA or Local RA.	The ISO appreciates feedback from SVP. The ISO will build functionality to have both system and local designation on the same template.
	SDG&E	SDG&E objects to ISO's proposal to unbundle Local and System RA attributes. ISO's proposal does not offer consistent treatment of capacity attributes for all market participants. ISO has not shown how it treats market participants equally in its proposal. ISO's proposal asserts that resource attributes are set based on contract language rather than geographic or operational characteristics. This reasoning is flawed. The ISO is proposing to change the entire RA framework of Local RA compliance from an annual year ahead showing to that of monthly showings. This unintended change requires more thorough vetting and further explanation to stakeholders. The resulting changes from ISO's proposal reaches farther than the original issue raised by other stakeholders. For these reasons, SDG&E does not support ISO's proposal. SDG&E recommends ISO to reconsider SDG&E's alternate proposal, mentioned in SDG&E's comments to ISO's straw proposal, which is simpler to implement and has significantly less impacts to all stakeholders.	The ISO understands concerns about unbundling System and Local RA. However, the ISO provides the LSE in the month ahead and year ahead showings the benefit of the locational attribute of all resources. However, because that attribute is not shown and may not have been compensated, it is not reasonable for the ISO to automatically assume that the attribute has been compensated unless it has been shown as such. It is also, therefore, not reasonable for

		ISO should review the results of local resource substitutions before and after the implementation of RSI 1A to see if there is improvement. Once that analysis is done, then should ISO make other proposals.	the ISO to impose a substitution obligation that differs from the product the ISO knows the capacity has been procured to provide (*i.e.* the capacity type for which the MW has been shown). The ISO is not proposing any significant changes to the timing and/or frequency of local RA showings. The ISO has reviewed SDG&E's alternative proposal and 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 is designed to create a more equitable solution where the substitution requirements mirror the capacity obligation for which they have been procured.
	Six Cities	The Six Cities support the ISO's proposals (I) to allow system capacity to substitute for capacity that is located in a local area but has been shown for system RA when such capacity is subject to forced outage, and (ii) to allow for MWs of capacity from a resource, rather than the entire resource, to be designated as local capacity.	The ISO appreciates Six Cities' support for this element of the proposal.
	Calpine Corp.	Calpine fully supports the changes in this version of the proposal to allow capacity in local areas that has been sold as system RA capacity to be substituted with other system RA capacity in the event of a forced outage. […]	The ISO appreciates the comments in support of this element of the proposal. In response to Calpine's request

		Calpine requests one minor clarification of the current proposal. The proposal refers to two specific sources of substitute local RA capacity: (1) capacity from non-RA resources and (2) Incremental RA capacity that has not been sold from resources from which some RA capacity already has been sold. Under the current proposal, might it also be possible to provide substitute local RA capacity by converting system RA capacity that has been sold from a suitable local resource to local RA capacity—assuming that the substitute capacity would itself be replaced with additional system or local RA capacity?	for clarification, the ISO does not believe that it is possible to convert system RA capacity that has been sold from a suitable local resource to local RA capacity. The capacity must be designated as a local capacity.
	PG&E	…CAISO should continue its work from RSI Phase 1A by investigating the possibility of loosening substitution eligibility to allow resources outside of Local Areas to substitute for resources within the Local Area based on the characteristics of the system and reserve margins within the area. PG&E would like to reiterate its concerns outlined in previous comments and list two new concerns: 1) Adding a new RA showing adds unnecessary complexity and increases the probability of reliability concerns. 2) The change does not add value as the standard Resource Adequacy Confirmation Agreement compensates the seller for its Local RA attributes. 3) The status quo allows suppliers to reflect their costs in contractual negotiations to address the identified cost risk borne by suppliers. 4) The CAISO does not appear to have a clear understanding of the costs and implementation difficulties this change will lead to by creating a need to track whether local resources are purchased and/or shown for System RA or Local RA. 5) This change could result in an increase in CPM designations, resulting in unnecessarily increasing costs to Load. 6) The current CPM under development does not consider whether local resources are shown as System RA or Local RA, and the current proposal does not suggest changes to the CPM to accommodate this change. 7) Local market power concerns 8) The CAISO will not represent the needs of the system the same for market participants as the CAISO intends to study the system for its review of collective deficiencies. By allowing suppliers the ability to show their Local RA resource as System RA or Local RA, suppliers are given a strong incentive to sell a portion of their resources as system and withhold Local RA attributes. This may lead to increased costs for LSEs in procuring the residual resources in that same Local Capacity Area. We request that the CAISO	The ISO appreciates PG&E's feedback on this element of the proposal. The ISO believes that this option provides a mechanism by which LSEs can show the ISO the capacity it needs to meet its local capacity obligation. The ISO believes that focusing on whole unit local designations could create incentives that would inhibit a resource's ability to procure substitute local capacity. By definition, there are only a limited number of resources in a local area that can provide substitute capacity when another local resource goes on outage. If one of those resources is procured as a system resource, it may be unwilling to provide local capacity substitution if it would be required to convert the entire resource into a local resource. Doing so, increases the potential substitution obligation for the

		consult with the Department of Market Monitoring to discuss potential gaming opportunities that this proposed change could cause. Another issue that the CAISO should give weight in deliberating this change is the inconsistency between the opportunities and costs for suppliers to substitute for Local RA forced outages and how the CAISO resolves or recognizes Local RA deficiencies…the CAISO will ignore whether resources in Local Capacity Areas are shown as System RA or not. However, when a Scheduling Coordinator has a Local RA resource that has a forced outage during the month, it will have a completely different view of the system. The Scheduling Coordinator will have to take into account whether a resource in a local area is shown as System RA to determine whether the Scheduling Coordinator will be able to use this resource for Substitute RA. Additionally, if a resource in a Local Capacity Area that is shown as System RA goes on outage and uses a resource outside of the local area for substitution, then during the delivery month, the CAISO's initial study would not represent a realistic picture of the reliability provided by the RA fleet. This inconsistency could lead to reliability issues or Exceptional Dispatch CPMs, which would be allocated to Load. Fundamentally, the structure of providing market participants with one view of the needs of the system that are divorced from the way that the CAISO will study it for collective deficiencies does not make sense.	new resource. This is particularly true if the quantity to be substituted is small, relative to the amount of system capacity the resource has sold. The ISO has consulted with DMM and the MSC and no potential gaming has been identified within the ISO's purview. The ISO's proposal provides the incentive to properly identify the resource as local RA. If an LSE wishes to avoid any potential risks for CPM designations it may do so by ensuring resources in the local area are, in fact, shown as local RA and therefore impose a substitution obligation (local for local) on the resource's SC that mitigates potential risks of CPM designation.
4 **Process to Update EFC List During the Year**	SCE	SCE does not have any issue with this since RA AIM implications of EFC changes will be worked through in the CCE Phase 3 initiative.	The ISO appreciates SCE's comments on this matter.
	SDG&E	ISO has established a process to request NQC updates in the CIRA tool. SDG&E recommends the same process should be utilized for EFC updates. This would provide consistent process for scheduling coordinators.	The ISO appreciates SDG&E's comments and agrees that EFC updates should follow a similar process to the NQC updates in the CIRA tool. The ISO will look to include this in its implementation efforts.

	Six Cities	The Six Cities support allowing updates to Net Qualifying Capacity ("NQC") or Effective Flexible Capacity ("EFC") values, either for increases or decreases, to reflect changes in operating characteristics. As discussed in their December 9, 2015 comments on the Second Revised Straw Proposal, the Six Cities encourage the ISO to target publication of revised NQC and EFC lists by T-45D, where T is the deadline for submitting the annual RA showing, and to schedule necessary coordination with LRAs with that target date as a guiding objective.	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.
	PG&E	PG&E would like to reiterate its request that CAISO collaboratively set a deadline by which final EFC and NQC lists would be published. This deadline should be set through a discussion between LSEs, LRAs, and the CAISO, as each has a role to play in adhering to the deadline.	See ISO's response above to Six Cities' comments.
5 **Address the RAAIM Exemption Currently in Place for Combined Flexible Capacity Resources**	SDG&E	SDG&E reiterates is previous concern where a poor performing resource is combined with a better performing resource. Since the ISO is only assessing availability based on the better performing resource, the poor performing resource would have a free pass from the performance obligations of the combined resource. SDG&E requests ISO to monitor and report the usage of the short term use limitation reached NOW of combined resources as well as if a poor performing resource of the combined resource is consistently not being penalized for its poor performance.	The ISO understands SDG&E's concerns. However, the ISO disagrees that the poor performing resource will have a free pass because the ISO must calculate the total availability obligations for both resources. Performance of the combined resource isn't based on the worst resource performance but the best resource. The ISO will monitor the lower performing resource to determine if any changes are needed to the proposal.
	Six Cities	The Six Cities support the quasi-resource concept for applying RAAIM to combination flexible capacity resources as described in the Draft Final Proposal. For clarification, the Six Cities understand that the change in terminology from "pseudo-resource" as used in the Second Revised Straw Proposal to "quasi-resource" as used in the Draft Final Proposal does not affect the substance of the proposal, and that the quasi-resource concept as described in the Draft Final Proposal is substantively equivalent to the pseudo-resource concept as described in the Second Revised Straw Proposal.	The ISO appreciates Six Cities' support for this element of the proposal. Six Cities is correct in their clarification comment.

6 **Streamlining Monthly RA Showings**	NRG	The CAISO proposes to allow LSEs to automatically "roll over" annual RA plans to their monthly RA plans, but not to allow suppliers to do the same thing. The CAISO offers that suppliers could incur "accidental" penalties rolling over their annual supply plans, and that Scheduling Coordinators can still submit their monthly supply plans at the same time the annual supply is submitted. NRG understands that suppliers would be liable for failing to make necessary changes to its monthly supply plans if the annual plans were simply rolled over to the monthly plan. However, requiring that suppliers make monthly showings to prevent the possibility of failing to catch changes in the supply plan seems a harsh remedy	The ISO is no longer proposing to automatically roll an LSE's RA showings from the annual into the monthly showings. Instead, the ISO has developed a tool to monitor the submission of RA showings and developed a process to quickly contact LSEs if a RA showing is not received by the due date. These two changes should address the concern of potential, large, late information penalties being assessed for late RA showings where the LSE may not have otherwise been aware of the missing submittal.
	SVP	SVP would appreciate the CAISO consider automatically rolling over annual resource supply plans into the monthly showing as well. SVP strongly believes that rolling over the annual showings to the monthly showings will benefit both LSEs and Resource Owners by eliminating the redundant work and unnecessary penalties associated with a failure to submit plans when there are no changes. The process should be revised to a 'manage by exception' case, and entities should only make revisions in the monthly filings when there is a change.	See the ISO's response above to the comment above by NRG.
	Six Cities	The Six Cities support the ISO's proposal to automatically roll all RA showings made in annual plans into the monthly showings for all LSEs, while allowing LSEs to modify any monthly showing as necessary to reflect changes from the annual plan.	See the ISO's response above to the comment above by NRG.
7 **Resource Adequacy Showing Requirements for Small LSEs**	California Department of Water Resources (CDWR)	If there is a significant number of such LSEs, they could cause considerable amount of capacity needs in aggregate. Does ISO procure such capacity needs? How is the cost allocated?	The ISO does not believe that a significant number of LSEs will need this exemption. The ISO stresses that not submitting an RA showing will not exempt the LSE from possible allocation of backstop procurement costs.

			The ISO has identified that in 2016, there has only been one LSE that has required an exemption from its RA showing. The ISO believes that this exemption will only apply to a limited number of LSEs and have little to no impact.
	Northern California Power Agency (NCPA)	NCPA supports this element of the proposal.	The ISO appreciates NCPA's support of this element of the proposal.
	NRG Energy, Inc. (NRG)	NRG supports the CAISO's position to allow LSEs with an RA obligation of less than one (1) MW to show zero (0) MW for that obligation and be deemed to have met the obligation.	The ISO appreciates NRG's support for this element of the proposal. It is important to note that if an LSE's obligation is less than 1 MW, they are not required to submit a showing. However, the LSE is not deemed to be exempt from the RA requirement and could be subject to backstop procurement in the event there is a deficiency in the total amount or RA capacity procured by all LSEs.
	PG&E	PG&E does not support different resource adequacy showing requirements for small LSEs – we believe that the CAISO should focus on simplifications that affect all LSEs as opposed to focusing its efforts on a particular group of market participants. On the particular details of the proposed exemptions, PG&E is concerned that these changes could cause more backstop procurement than is necessary. If more backstop procurement occurs due to these changes, PG&E is particularly concerned that such backstop might not be allocated appropriately. CAISO should describe how a local collective deficiency would not occur in situations similar to the example provided in its revised straw proposal.	Please see the ISO's response to SDG&E's comments below.

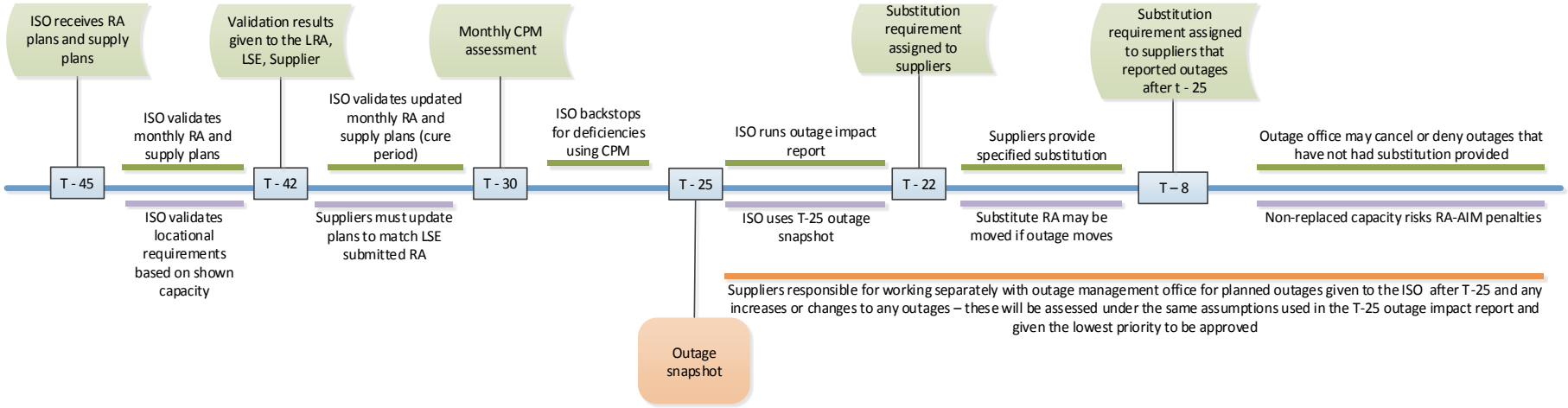
	SDG&E	SDG&E would like understand the magnitude of small LSE requirements… ISO's systems do not allow an LSE or supplier to show 0 MWs of capacity from any particular resource. If an LSE had less than 1MW of RA requirement for Local, System and Flexible, the LSE would not be able to submit an RA showing of 0 MWs. SDG&E would appreciate greater clarity around its proposal…	The ISO believes that this exemption will only apply to a limited number of LSEs and have little to no impact. As stated in the proposal, in 2016, the ISO has identified only one LSE that has required an exemption. The ISO is proposing to exempt an LSE from the RA showing instead of submitting a MW amount of 0. The LSE will be notified of its deficiency and will have the opportunity to cure the deficiency. If the LSE does not cure the deficiency and the ISO exercises its backstop authority, the LSE will be subject to cost allocation for capacity procured.
	"Six Cities"	The Six Cities support this aspect of the Straw Proposal.	The ISO appreciates Six Cities' support of this element of the proposal.
	Small Publicly Owned Utility Coalition	The Small POU Coalition agrees that RA showings for local and flexible capacity needed additional clarity…Small POU Coalition also supports the ISO's proposal to allow an LSE with a monthly RA requirement for a specific month and specific RA product (system, local, or flexible) to show zero MW for that RA product. The Small POU Coalition does ask for a minor revision to the FRACMOO2—an example in the FRACMOO2 Straw Proposal has tied permission to show zero to peak load rather than the monthly RA requirement…The Small POU Coalition asks that this example be modified in Revised Straw Proposal to better reflect the applicability of the proposal to RA rather than peak load… Further…the FRACMOO2 Straw Proposal acknowledges that peak load for a small LSE could be high for a single month, but much lower for the greater portion of the year	The ISO has revised the proposal to add greater clarity on RA showing obligations and potential penalties for small LSEs as well as the potential risks to incur backstop procurement costs. Please reference section 4.7 for the specifics of the ISO's revised proposal.

		(see example above). The Small POU Coalition requests that the ISO evaluate this tariff requirement in the forthcoming Revised Straw Proposal. Lastly… additional discussion on RA issues for small LSEs, such as cost caps and improvements to information submission verification—to the extent that any of [these] issues are not addressed in the forthcoming RSI2 Draft Final Proposal, the Small POU Coalition asks that they be addressed within the FRACMOO2 Revised Straw Proposal.	
8(a) [Other] **Minimum Monthly Starts Criteria**	SDG&E	SDG&E believes ISO must clearly spell out the minimum amount of starts per month a resource must have in order to qualify for each flexible category. At this time, ISO's proposal is ambiguous to those numbers. SDG&E also would like ISO to respond to the following questions for determining flexible categories. • How will ISO set a resource's category for the EFC list if the previous year's use limited data template lists January monthly start limitation as 70 but 30 for the month of May? The EFC list shows a static EFC category for the entire year. • How will ISO determine a resource's category if the use-limited data template only lists an annual start limitation? Should a resource with 15 monthly starts limitation, but available for 4 starts per day, be qualified as peak ramping if the ISO's opportunity cost adder calculation only expects the resource to be started 10 times every month?	The ISO has clearly defined the minimum amount of starts through the FRACMOO initiative as well as in the ISO tariff section 40.10.
8(b) [Other] **Timeline/ Process/ Scope**	CPUC	We requested that the issues be discussed holistically at a combined stakeholder meeting so that stakeholders could understand the interactions between changes to commitment cost rules and Masterfile rules, and how resources may be subject to additional penalties under RAAIM based on the CCE 3 proposal, and whether or not the bidding rules initiative proposals alleviate any of these concerns. Furthermore, since the CCE 3 proposal is going to the CAISO board in March after only one additional two-hour stakeholder call, there is not sufficient time and opportunity for stakeholders to discuss these changes in an open and transparent process. Furthermore, the RSI proposals are scheduled to go to the board in June, and the CCE 3 should be on the same timeline since these are now in fact a package of intertwined tariff amendments, which affect resource operations and potential for penalties. Since the timeline for RSI implementation is not until 2018, we urge the CAISO to take the time necessary to align the initiatives, and bring them to the CAISO board later in the year.	The ISO appreciates the CPUC's concerns and has deferred consideration of the RSI 2 the initiative until the August/ September Board of Governors meeting. The extra time has allowed the ISO to consider policy alignment, which has resulted in the ISO dropping several proposals and adding one As has been done in the past, the ISO will continue to coordinate its efforts with

		[…] CPUC Staff are concerned about how this proposed change interacts with the RA program and what happens when the RA program's validations reach different conclusions. Mapping out all the potential implications has not been done throughout the RSI initiative process, and this is an incredibly complex issue wherein solving one problem could lead to many new ones being created. CPUC Staff recommends that this initiative be put on hold until an in-person stakeholder meeting can be held at which CAISO and stakeholders discuss a series of hypothetical situations related to outage substitution for local/system resources, to determine all of the potential implications of the status quo vs. the current proposal.	LRAs to align ISO and LRA RA processes.
8(c) [Other] **RAAIM Exemption Inconsistencies**	PG&E	While implementing RSI Phase 1A, PG&E has realized that certain hydro resources will face similar challenges responding to incentives under the RA availability incentive mechanism (RAAIM) as the CAISO described for wind and solar resources in its RSI Phase 1 Draft Final Proposal. Consistent with the treatment of wind and solar resources, PG&E proposes that the CAISO exempt hydro resources from the RA availability incentive mechanism (RAAIM) if the resource design or regulatory requirements result in variability beyond the control of the Scheduling Coordinator and/or operator of the resource. Specifically, if a hydro resource meets any of the following criteria…: • Design Limitations. Hydro resources with no storage capacity or switching center limitations that prevent the resource from increasing or decreasing output; • Flow Restrictions. Hydro resources where the Scheduling Coordinator lacks control over stream flow due to water rights, regulatory requirements…; or • Spill Considerations. Hydro resources that have inadequate storage capacity. Similar to the existing resource categories that are already exempt from the generic RAAIM (Wind and Solar), this subcategory of hydro resources are incapable of responding to RAAIM incentives and should not be counted as unavailable to the extent environmental conditions prevent them from providing the MW amount of their RA capacity to the market… PG&E proposes that the Scheduling Coordinator for a hydro resource that meets the specified criteria would register the resource for the RAAIM exemption by submitting a	The ISO appreciates PG&E's comments on this matter. However, additional exemptions to the RAAIM are beyond the scope of the current initiative.

		one-time affidavit executed by an executive officer or member of senior management of the generator owner or of the Scheduling Coordinator itself. PG&E recommends that there be a clause in the affidavit that would state an obligation to update the status of the resource if any major construction changes or resource design changes lead to the resource no longer qualifying based on the specified criteria. Additionally, there are conditions (e.g. water levels) that could change the dispatchable capability of a hydro resource. If such changes occur, the resource should be required to update its status. PG&E recommends that establishing exemptions or any updates could happen in conjunction with the submittal of use plans and use-limit updates. The CAISO's tariff includes definitions for Hydro Spill Generation and Regulatory Must-Run Generation that could be utilized for developing criteria for RAAIM-exempt hydro resources.	
8(d) [Other] **Proposal Language**	Six Cities	For clarity, the Six Cities recommend that the ISO conform the terminology in Appendix D to the Draft Final Proposal to the draft tariff language proposed for the RSI 1B amendments by referring to "substitute" capacity rather than "replacement" capacity.	The ISO appreciates this suggestion and has made the changes to reflect the use of "substitution" rather than "replacement."

Appendix B: Timeline for Substitute Capacity for Flexible Capacity on Planned Outage


ISO receives RA plans and supply plans
Validation results given to the LRA, LSE, Supplier
Monthly CPM assessment
Substitution requirement assigned to suppliers
Substitution requirement assigned to suppliers that reported outages after t - 25
ISO validates monthly RA and supply plans
ISO validates updated monthly RA and supply plans (cure period)
ISO backstops for deficiencies using CPM
ISO runs outage impact report
Suppliers provide specified substitution
Outage office may cancel or deny outages that have not had substitution provided
T - 45
T - 42
T - 30
T - 25
T - 22
T – 8
ISO validates locational requirements based on shown capacity
Suppliers must update plans to match LSE submitted RA
ISO uses T-25 outage snapshot
Substitute RA may be moved if outage moves
Non-replaced capacity risks RA-AIM penalties
Suppliers responsible for working separately with outage management office for planned outages given to the ISO after T-25 and any increases or changes to any outages – these will be assessed under the same assumptions used in the T-25 outage impact report and given the lowest priority to be approved
Outage snapshot