Reliability Services Initiative – Phase 2:

Revised Straw Proposal

October 7, 2015

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1. Executive summary

Reliability Services Initiative – Phase 2 (RSI2) will focus 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 necessary information about the Local Regulatory Authority's (LRA) RA program needed to validate a Load serving Entities' (LSE) showing. This information includes such things as the planning reserve margin and capacity credit structure. Additionally, the ISO will establish October 1 as the deadline to receive this data or the ISO will apply its default RA provisions.

2) Substitution for flexible capacity resources on planned outage – The ISO proposes similar substitution timelines for flexible capacity resources on planned outages as those proposed in the Reliability Services Initiative – Phase 1 (RSI1) stakeholder initiative for system and local RA resources. Further, the ISO also proposes that this substitute capacity be from the same category of flexible capacity or better as the capacity taking the 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 replace that capacity with system RA capacity. The ISO has identified four options to address this issue and has determined a preferred option that would allow resources in a local area procured for system RA that go on forced outage to replace with another system resource.

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 for the upcoming years. Additionally, RSI 1 developed a nature-of-work outage card exempting use-limited resources from RAAIM once the limitation has been reached. Use-limited resource adequacy resources with an opportunity cost may expend their limitation(s) while still being shown on RA plans. To ensure sufficient capacity remains available to the ISO when use-limited resource adequacy resources are no longer available to the market, the ISO is now proposing to not exempt use-limited resources from RAAIM starting the first month following the outage card.
5) Masterfile changes and RAAIM availability – The ISO reviewed two changes to resource parameters that may impact the resource's ability to provide Effective Flexible Capacity:

changes that impact the quantity of EFC provided and changes that impact the category of flexible capacity for which it is eligible. The proposed RAAIM mechanism from RSI1 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 to treat resources that no longer qualify for a category of flexible capacity assessed as 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 is proposing 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 – LSE's 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, then the ISO will use the annual showing to for all RA assessments.

2. Changes to proposal and stakeholder comments

In its 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 issue paper were generally supportive of the proposed scope of RSI2. However, some stakeholders suggested that the ISO consider other items as part of RSI2. The following provides an overview of these items and the ISO's response.

(1) Clarify Local Regulatory Authority interaction and process alignment CPUC, CDWR, NCPA, and PG&E agree that the ISO should pursue better process alignment and elimination of duplicative efforts. Each stakeholder seeks clarifications on the types of validations the ISO will perform, clarifications on differences between the ISO methodology and the CPUC methodology, standardization, and generally advocate for conformed timelines. As discussed in section 5.1, the ISO (a) proposes to allow certain information from the LRA configuration to roll over year to year, (b) continues to set a deadline after which point the ISO will rely on its default provisions but proposes to set the specific deadline in the BPM as it is an implementation detail, (c) releases a version of the configuration that it will use as its default. As it relates to CPUC/LRA access to the ISO's CIRA system, the ISO's preferred method of communicating sensitive jurisdictional

information is via publicly vetted subpoena and conveyance of information through established legal channels. The ISO has an obligation to maintain the integrity, security, and confidentiality of the data collected through CIRA. Before providing LRAs access to these systems, the ISO must first fully assess all potential data, systems security, and integrity requirements to establish clear access boundaries consistent with legal authority. Further, creating such an interface will likely come at significant cost. The ISO would need to determine the correct means of allocating these costs. As such, this issue is beyond the scope of the RSI2 stakeholder initiative.

(2) Substitution for flexible capacity resources on planned outage – SCE and Six Cities suggested that there should not be more stringent requirements for flexible capacity resources on a planned outage. SDG&E suggested that use-limited resources should qualify for Category 1 flexible RA if it has 15 allowed startups during the one week planned outage. Six Cities states that the ISO proposal is not consistent with the current Straw Proposal and RSI1a proposal. The ISO provides clarity, explaining the reasons the current proposal of "category or better" is consistent with substitution rules for flexible capacity on forced outage proposed in the ISO RSI1a FERC filing. 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 – NRG offered an alternative solution suggesting a flag identifying if capacity has been procured as local or system, this proposal is supported by Calpine. SCE and SDG&E offer alternatives similar to the one offered by NRG. The ISO has assessed these options and developed a similar option. Given the options considered, the ISO believes this new option provides a reasonable solution. This option, along with additional discussion regarding the difference between this option and those offered by stakeholders and why the ISO views this as the preferred option, is covered in section 5.3.

(4) Process to update EFC list during the year – SDG&E asserts that this topic better addressed in Flexible Resource Adequacy Criteria and Must Offer Obligation – Phase 2 (FRACMOO2). The ISO disagrees. The treatment of resources under RAAIM is most appropriately defined as a process, not a product definition. PG&E, SCE and SDG&E each request additional clarification regarding the ISO proposal. PG&E seeks clarity about the treatment of resources that become flexible in the middle of the year, the information the ISO will collect from use plans and how it will use the data, including how it will determine if a resource is eligible to be flexible, and when the SC will be notified of the impact of changes. All of these comments are addressed in greater detail in section 5.4.

(5) Masterfile changes and RAAIM availability – SCE and SDG&E requests additional clarity regarding all Masterfile parameters that could impact the EFC of a resource and how it is assessed under RAAIM. SDG&E further states that the ISO should also include a discussion about the impact of changes in ramp rate as well. CPUC requests additional information about how the ISO will use resources' use-limitation to determine flexible capacity category. Six Cities requests additional information regarding an SC's ability to

provide substitute flexible capacity to avoid RAAIM charges. The ISO has clarified which Masterfile fields impact the EFC quantity and category eligibility. These comments are addressed in greater detail in section 5.5.

(6) Address the RAAIM exemption currently in place for combined flexible capacity resources – Several stakeholders sought additional explanation about why the ISO's proposal is necessary and details about how the exemption will be applied. For example SCE and Six cities both request the ISO continue to utilize the flexible combination construct and apply RAAIM to both resources based on the availability of the resources in the combination. PG&E supports further consideration of such an option. In light of stakeholder comments, the ISO has reexamined the proposed limited exemption. Based on this reexamination, it is not clear that the ISO's proposed exemption will provide comparable functionality relative to the combined flexible capacity option the ISO desired. The ISO considered an option similar to those proposed by PG&E and Six Cities. The details of this option are provided in section 5.6. SCE requests the ISO further expand the allowable combination types, including allowing two resources with one start per day to qualify as a base ramping resource. The expansion of the combination resource definition requested by SCE is not feasible. Additional discussion of this option is also provided in section 5.6.

(7) Other comments – Several stakeholders offered comments on matters not already addressed above or comments to the issue paper. This comments include the following

a. The Small POU Coalition asked that the ISO examine options to streamline the RA showing process and to adjust the penalty structure to account for the size of the LSE. While the ISO will not reexamine the penalty structures associated with RA showings, it has identified options to streamline the RA process and increase transparency and notification. These options are outlined in section 5.7.

b. CDWR asked if the ISO is considering the removal of the RAAIM exemption for wind and solar resources. With the exception of the exemption for combination resources, the ISO is not proposing to remove any other RAAIM exemptions in RSI2. CDWR also asks if the ISO will explore allowing participating load to provide flexible RA. Any gaps that exist for participating load providing flexible RA should be brought up in the context of the FRACMOO2 stakeholder initiative.

c. PG&E requested the ISO consider cogeneration resources that can provide economic bids in day-ahead market but cannot respond to real-time dispatch should be exempt from RUC obligations and bid insertion. The ISO believes this issue is beyond the scope of this initiative.

3. Stakeholder engagement process

The ISO is targeting February 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 26, 2015	Comments due on revised straw proposal
November 4, 2015	Draft final proposal posted
November 11, 2015	Stakeholder call on draft final proposal
December 1, 2015	Comments due on draft final proposal
Feb 3-4, 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 Resource Adequacy (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 towards to address flexible capacity needs in 2013 -14 in the ISO's Flexible Resource Adequacy Criteria and Must Offer Obligation (FRACMOO) stakeholder initiative[1] 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 replace 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 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.

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

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.

Originally, 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 providing[6]
- 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 and (2) addressing other unresolved issues from the FRACMOO stakeholder initiative. The ISO has subsequently reviewed the outstanding issues from both RSI1 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

[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.

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. RSI2 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 RSI1

Issues directly connected to the flexible capacity product definition and covered in FRACMOO2	**Processes improvements necessary for administering the RA program and covered in RSI2**
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 intertie 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
	Options to streamline the RA process and increase transparency and notification

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

5. 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 to provide LRAs and market participants clear guidance on when LRA requirements or ISO default RA tariff provisions apply. Clearly defining 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 materials[8] that outline the various facets of their RA programs. The ISO Tariff gives due weight to the LRAs' materials 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.[9] 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.[10] For the ISO to effectively and efficiently (1) evaluate the LSEs' compliance with the ISO Tariff by evaluating LSE demonstrations compared to applicable local regulatory authority RA requirements,[11] 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.

[8] Official Resource Adequacy program material must be an official document that details the LRA's RA program.
[9] ISO Tariff Section 40.7, "Compliance"
[10] ISO Tariff Section 43.2.3, "SC Failure to Show Sufficient Resource Adequacy Resources"
[11] 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

The ISO prefers to approach the evaluations exactly aligned with the LRA 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 defaults 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 would require specific information regarding the requirements of the LRA RA program in order 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,
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 CAISO will request these components through a standardized template to efficiently evaluate LSEs' RA showings in accordance with LRA programs. Please refer to Appendix A below for the proposed template.

Timeline

To implement the standard local regulatory authority configuration in a timely fashion, the ISO must receive the configuration information for the upcoming RA compliance year prior to the first business day in October of the current year. 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 local regulatory authority 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 provisions, and are included in its default configuration template in Appendix B.

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 local regulatory authority 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. The ISO now proposes to differentiate the elements of the template into two types, one type will automatically roll over each year unless otherwise notified by the LRA by the due date and another type that is necessary to receive 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 would now be required to provide the ISO with the same 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 substitution capacity must be eligible to provide at least the same category of flexible capacity as the capacity that goes on a planned outage. Accordingly, the 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 in 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, however, is not to allow substitute capacity to meet *only* the must offer obligation without regard to the quality of the flexible capacity provided. The "category-or-better" requirement is needed to maintain the quality of the flexible capacity provided. For example, an SC could show a resource qualified for a given category on the first day of the month, only to replace 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. These must offer obligations are defined based on flexible capacity categories defined in section 40.10.3.2-4, including the qualifying criteria for the categories. The ISO will clarify the language in the RSI2 filing to more clearly reflect the "same category or better concept."

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 as 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.

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 C of this document. The new planned outage replacement process, which will be filed at FERC as part of the ISO's RSI1b filing, is as follows:[12]

> 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 given 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

[12] Reliability Services Initiative – Phase 1 at http://www.caiso.com/Documents/DraftFinalProposal-ReliabilityServices.pdf

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.[13] 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 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 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

The ISO may require replacement capacity for local resources that go on *planned* outages or deny the outage. As part of this stakeholder process, the ISO will assess if it is possible to allow for local substitute capacity as a means to allow the resource to take a planned outage. This would offer resource SCs another option when trying to take an outage.

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

[13] 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.

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.

Local capacity resources on planned outages

As noted above, when resources in a local capacity area go on planned outages, the ISO may require replacement capacity. If the capacity is not needed to meet local reliability, the ISO may approve the outage, but allow for replacement 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. The ISO is proposing a third option. 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.

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 each of these options 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 represents a pareto improvement.[14]

The LCR study: The history and process

As described in the Final Manual: 2016 Local Capacity Area Technical study, the ISO conducts the LCR study process each year to "determine the minimum capacity needed in each

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

identified transmission constrained "load pocket" or Local Capacity Area to ensure reliable grid operations."[15] The ISO's LCR studies date back to 2006. Each year, the ISO conducts a stakeholder process to outline the assumptions and inputs that will be used in for that year's study process. The ISO runs the study for each of the ISO's 10 local capacity areas. The ISO clearly outlines the resource assumptions (including generation, transmission, and load inputs), as well as any applicable reliability standard. The ISO will identify the minimum amount of local capacity needed in each load pocket to maintain grid reliability as required by the LCR criteria. The ISO runs numerous simulations to determine the worst contingency for a given local area or sub-area. The total minimum resource capacity in the local area, required to mitigate the worst contingency, is the amount of the Local Capacity requirement. The ISO publishes draft and final versions of both the manual used to conduct the study and the technical study. This allows for a transparent stakeholder process that informs parties of all assumptions used in the study and the results facilitate procurement of local capacity resources.

As part of the RA program, the ISO receives both annual and monthly RA showings. These showings demonstrate the resources that have been procured towards meeting an LSE's system and local RA requirements. Using these showings, the ISO assesses whether sufficient capacity has been procured in each local capacity area. The ISO does not currently differentiate resources based on whether or not they were procured as local or system RA. This differentiation only occurs at an LRA level. The ISO only looks at the impact each resource in the showing has on a local capacity area because, from a reliability standpoint, it does not matter whether the resource was procured for local or system requirements. What matters is the impact the resource has on mitigating the local area constraints. The ISO's Tariff as well as the LCR study methodology requires that all available resources that impact the local area be included in its local capacity study as well as the RA showing validation. Therefore, any new policy that allows for a resource in a local area that was not procured as local capacity and goes on planned outage to be replaced with system capacity would also have to address how the ISO should account for that resource in the local capacity study and ensure local reliability is not degraded.

Options considered by the ISO

The ISO considered the following three options in the straw proposal:

1) Make no change;
2) Remove the resource from the local capacity study process; and
3) Leave the resource in the LCR study process, but allow ISO discretion regarding whether system or local capacity is needed if the resource goes on forced outage

[15] Final Manual 2016 Local Capacity Area Technical Study at p. 3.

As noted in the straw proposal, the ISO does not believe option 2 is a viable option. Stakeholders appear to agree with this assessment. As such, the ISO will not consider that option moving forward. While some stakeholders preferred option 1,[16] numerous stakeholders suggested alternative options. The ISO reviewed these options and has developed a fourth option.

4) Add 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.

All of these options, with the exception of option 2, are discussed below.

Make no change

The ISO tariff as well as the LCR study process have a long history and have been developed into their current form through several iterations and improvements.[17] Further, FERC has found the ISO's LCR study process and treatment of resources in local capacity areas to be just and reasonable. Therefore, absent a compelling alternative that ensures local reliability is not degraded by replacing a resource in a local capacity area going on a forced outage with a system resource, the ISO will consider the status quo as the default policy.

ISO has discretion regarding local or system substitution

The timing of forced outages makes reassessing local capacity needs infeasible. However, it may be possible to defer to ISO discretion regarding the type of capacity that is needed at the time of the forced outage. Under this scenario, a resource in a local capacity area that goes on a forced outage would have to request the ISO to grant a waiver of the local-for-local substitution requirement.

Although granting ISO discretion may enable the resource on outage to substitute with system capacity, it may not apply in all instances. As such, it may still result in a resources being subject to asymmetries between the price it is paid to provide system capacity and the costs to replace with local capacity. Further, it forces the ISO to make a discretionary decision that might work at a given point in time depending on general grid conditions, but may not work in other particular grid conditions, given subsequent changes in load and transmission availability condition. This is further complicated by the fact that multiple resources may be on outage at a given time. The ISO would face the difficult task of needing to develop a mechanism by which it could determine when system replacement was allowable and when it is not.

[16] NCPA, PG&E and SDG&E

[17] For the complete history of the ISO's LCR study, see http://www.caiso.com/informed/Pages/StakeholderProcesses/LocalCapacityRequirementsProcess.aspx

Add a local capacity designation to RA showings and allow for like-for-like forced outage substitute capacity

As noted above, the ISO does not currently track if capacity has been procured to meet system or local capacity requirements. Under this scenario, the ISO would add a designation to year-ahead and month-ahead RA showings and supply plans that identifies the specific capacity on which LSE is relying on to meet its local capacity requirements. The ISO will only use the designated resources to determine if an LSE has shown sufficient local capacity to meet its local capacity requirements. 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 is 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 capacity designated as a local RA that goes on a forced outage will be required to provide substitute capacity from another local capacity resource or be subject RAAIM charges. If any RA resource not designated as a local RA resource, even those physically located in a local area, go on forced outage, then they would only be required to provide substitute capacity from another system resource to avoid any potential RAAIM charges. In this scenario, there is no opportunity for the LSE to take any additional action. This differs from proposals from submitted by several stakeholders. However, after considering stakeholder comments to allow for supplemental showings, the ISO determined that such an opportunity is not needed. There are two reasons for this. First, the LSE, through the month-ahead RA showing fully established the responsibilities for providing substitute capacity.[18] 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 incentive for LSEs to mitigate CPM risks through the month-ahead showings by designating effective local capacity resources with local-for-local substitution requirements.

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

Specific local RA designations is the best solution

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 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.

As noted in the straw proposal the other options considered all had significant shortcomings. Specifically,

1) The status quo may lead to substitution costs that do not align with procurement compensation
2) The ISO believes that not modeling resources in a local capacity area study is not a responsible option.
3) Allowing ISO discretion regarding the type of substitute capacity required for the forced outage does not resolve the shortcomings identified in option 1 and was not feasible because of potential for changing grid conditions.

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.

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 during the year. Examples include resource switching from non-dispatchable to dispatchable, a new resource goes online, a resource's NQC increases. Several SCs have already contacted the ISO for EFC changes mid-year. The ISO will update 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

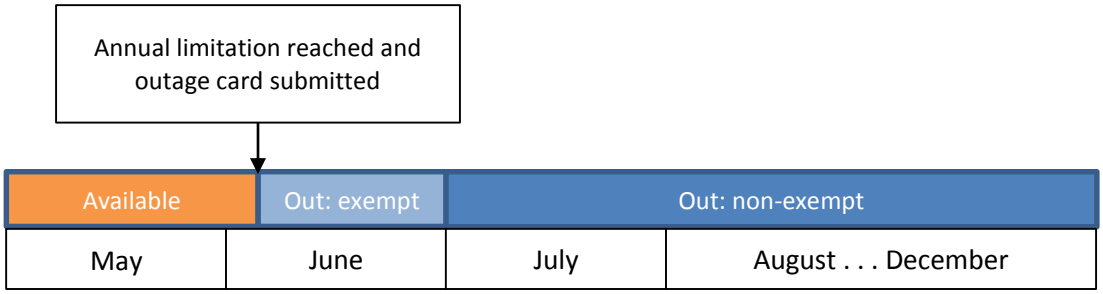
In RSI1, the ISO established a process by which SCs for use-limited resources will provide resources' use-limitations to the ISO. The use-limitations captured through this submission include any applicable monthly start-limitation for a resource. The ISO will utilize this data to determine whether a resource qualifies to provide Base, Peak, or Super-Peak flexible capacity. 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.[19] 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 an outage card is submitted, the resource will be exempt from RAAIM for the remainder of the month during which the limitation was reached. If the limitation horizon extends beyond the end of the month during which the limitation was reached, the resource is non-exempt from RAAIM until the resource becomes available.

Take the timeline shown below for illustrative purposes. Assume a resource adequacy or flexible resource adequacy resource reaches its annual limitation in June. At that time, the scheduling coordinator will submit an outage card indicating the resource is no longer available for the remainder of the year due to reaching the limitation. For the remaining days in June, the resource is exempt from RAAIM. Starting July 1st through December 31st, the resources is non-exempt from RAAIM.

[19] The most recent proposal can be found at http://www.caiso.com/informed/Pages/StakeholderProcesses/CommitmentCostEnhancementsPhase3.aspx



Use-limited capacity that becomes unavailable may have been previously shown on annual or monthly resource adequacy showings. Currently, there are no regulations 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 needed. Not exempting use-limited resources from RAAIM once they become unavailable is intended to provide an incentive for scheduling coordinators to show substitute capacity that is still available to the market.

5.5 Masterfile changes and RAAIM availability

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. There have been four such requests since the ISO Board approved the FRACMOO proposal. 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 RSI1 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, provide substitute capacity, or be subject to RAAIM for any unfulfilled capacity requirements.

PG&E and SCE have asked for clarity regarding the Masterfile fields that can impact that quantity of EFC a resource is able to provide. 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. SDG&E requested additional discussion of how changes to the ramp rate may impact a resources ability to provide. 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 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 create an operational limit that prohibits the resource from starting more once per day.[20] 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 al:

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 resource
2) Daily starts – Using minimum down time, resource may require either one start or two to qualify a category 1 flexible capacity resource
3) Dispatchability – All resources providing flexible capacity must be designated as dispatchable.

As an example of how this might 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. Since the start of 2015, five resources have requested changes to the Masterfile data that should result in a

[20] This means the resource would only be eligible provide flexible capacity above PMin.

resource no longer being eligible to provide the flexible capacity category for which it was originally deemed eligible.

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 resources 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.[21] 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.

[21] 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.

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."[22] 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 that option has been eliminated. 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 a single resource from the combination to provide that flexible capacity on any given day. Instead, the ISO 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

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

hours that day). For example, the following is a hypothetical combination flexible capacity resource:

Resource	PMax	System RA	Flexible RA[23]
Resource A	125	100	75 (combined)
Resource B	100	50	75 (combined)
Total	225	150	75

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 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 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. If 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	Availability (Flexible)	Availability (System)	Total

[23] 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.

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 replace 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	Availability (Flexible)	Availability (System)	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.

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 POUs. 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 POUs, the ISO believes that trying to create a delineation would be viewed as arbitrary and 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. Some LRAs only require jurisdictional LSEs submit annual system RA showings for summer months. LSEs are required to submit annual RA plans showing that they have procured 100 percent of the LSE's local capacity requirement and 90 percent of all flexible capacity requirements for all 12 months. Further, LSE's may also submit a system RA showing for all 12 months, or some portion of those

months, as part of its year ahead RA showing. The ISO proposes to automatically roll all RA showings made in annual plans into the monthly RA showing for all LSE. 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. If there are no changes from the year-ahead RA showing, then no action by the LSE is required to submit a monthly RA showing. This means that ALL monthly assessments of RA showings for an LSE that makes no changes would be done with the showings provided in the year-ahead showings. As such, the year-ahead showing that LSE should provide 100 percent of all RA requirements (system, local, and all applicable flexible capacity categories). Monthly RA plans are currently due at t-45 days before the operating month.

While 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. This ensures that resources, which will ultimately bear the substitute capacity burden, actively review their upcoming RA obligation. 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 October 14, 2015 to discuss the contents of this revised straw proposal. Stakeholder comments on this revised straw proposal will be due October 26, 2015. The ISO anticipates seeking ISO Board approval for the Reliability Services Initiative – Phase 2 in February 2016.

Appendix A: 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.	**Option 1:** LSE – Compliance Year – Compliance Month (January-December) – TAC Area (PGE, SCE, SDG) – Local Requirement (MW) **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 (%)
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.	**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) **Option 2:**

Question	Answer Format
	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 (%)
Credits. Does your LRA RA Program allow LSEs to use credits in your annual evaluation?	
For the annual <u>peak demand and reserve margin</u> evaluation:	
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)
For the annual <u>local</u> evaluation:	
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:**

under your jurisdiction must equal the MW requirements the ISO allocated to your local regulatory authority.	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 (%)
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)
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.	**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 (%)
Credits. Does your LRA RA Program allow LSEs to use credits in your monthly evaluation?	
For the monthly <u>peak demand and reserve margin</u> evaluation:	
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?	Each month for a full calendar year (Y/N)
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?	Each month for a full calendar year (Y/N)
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?	Each month for a full calendar year (Y/N)
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?	Each month for a full calendar year (Y/N)
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?	Each month for a full calendar year (Y/N)
MONTHLY SYSTEM OTHER CREDIT ELIGIBLE: Does your LRA RA Program allow load serving entities to	Each month for a full calendar year (Y/N)

count any other credits towards meeting its peak demand & reserve margin requirement?	
For the monthly <u>local</u> evaluation:	
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 B: ISO Default Standard Local Regulatory Authority Configuration Template

Default Annual Standard Local Regulatory Authority Configuration:

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 **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**
Credits. Does your LRA RA Program allow LSEs to use credits in your annual evaluation?	

Question	Answer Format
For the annual peak demand and reserve margin evaluation:	
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**
For the annual local evaluation:	
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**

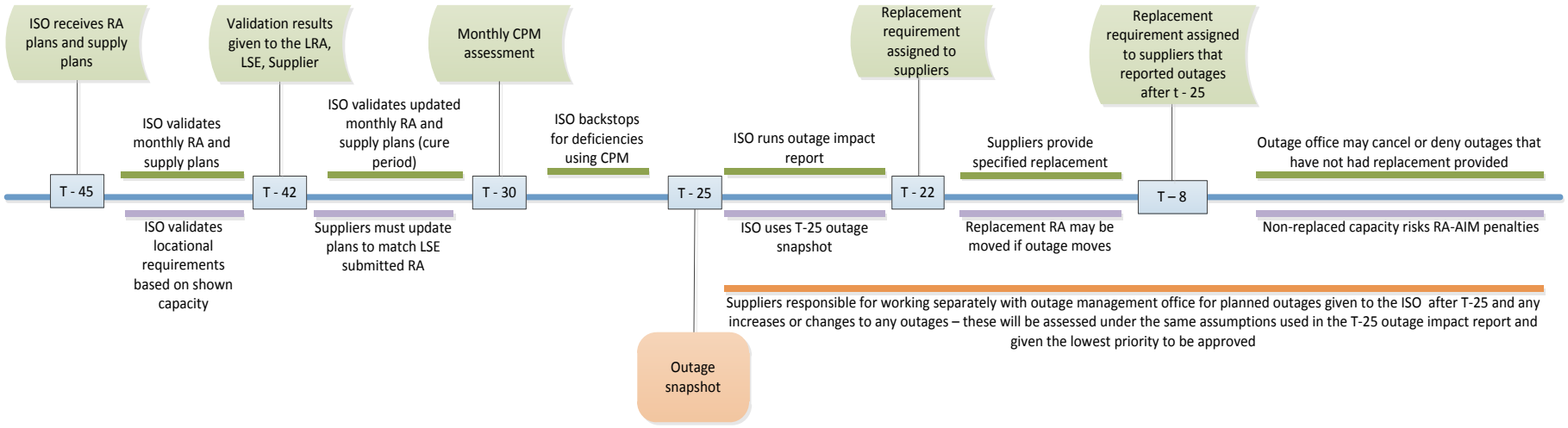
Default Monthly Standard Local Regulatory Authority Configuration:

Question	Answer Format
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 (%) **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**

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.	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**
Credits. Does your LRA RA Program allow LSEs to use credits in your monthly evaluation?	
For the monthly <u>peak demand and reserve margin</u> evaluation:	
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?	Each month for a full calendar year (Y/N) **N**
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?	Each month for a full calendar year (Y/N) **N/A**
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?	Each month for a full calendar year (Y/N) **Y**
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?	Each month for a full calendar year (Y/N) **N**
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?	Each month for a full calendar year (Y/N) **N**
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?	Each month for a full calendar year (Y/N) **N**
For the monthly <u>local</u> evaluation:	
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) **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) **N/A**

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) **Y**
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) **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) **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) **N**

Appendix C: 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
Replacement requirement assigned to suppliers
Replacement 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 replacement
Outage office may cancel or deny outages that have not had replacement 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
Replacement 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