

# Reliability Services – Phase 2 Second Revised Straw Proposal

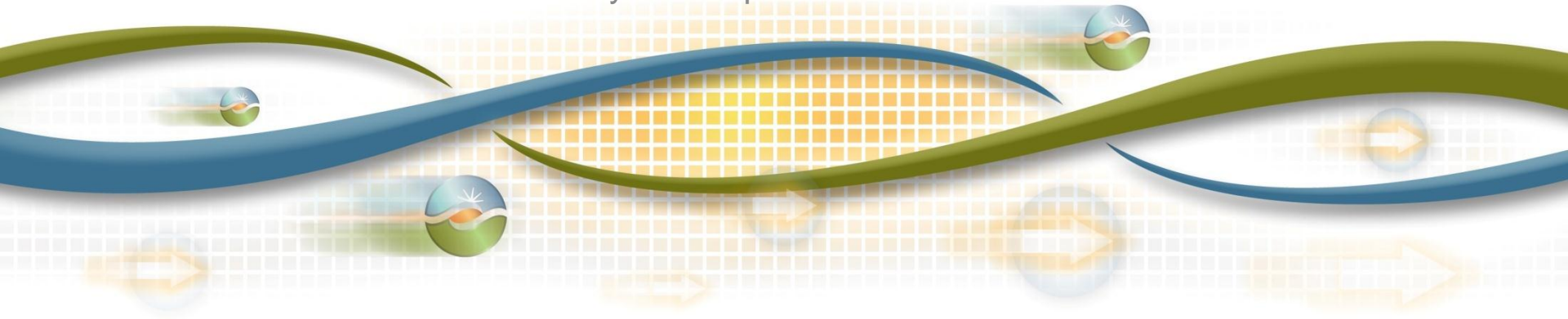
November 20, 2015

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Eric Kim

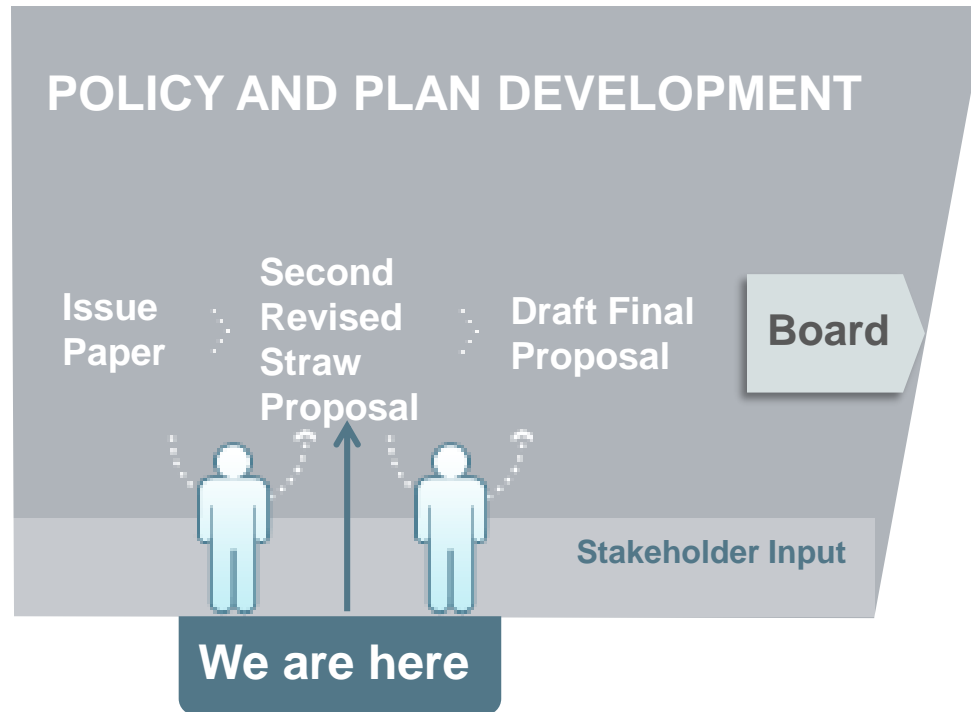
Market and Infrastructure Policy Developer



# Stakeholder Meeting – Agenda – 11/20/15

<b>Time</b>	<b>Topic</b>	<b>Presenter</b>
9:00 – 9:05	Introduction	Julia Payton
9:05 – 9:10	Summary of stakeholder comments	Eric Kim
9:10 – 9:35	LRA and ISO process alignment	Karl Meeusen
9:35 – 9:55	Planned outage substitution for flexible capacity	
9:55 – 10:30	Planned and forced outage substitute capacity in local capacity areas	
10:30 – 10:45	Updating EFC	
10:45 – 11:05	Masterfile changes and RAIM availability	
11:05 – 11:35	Combination flexible capacity resources	
11:35 – 11:55	Streamlining monthly RA showings	Julia Payton
11:55 – 12:00	Next Steps	

# ISO Policy Initiative Stakeholder Process



# Timeline

Date	Reliability Services Initiative – Phase 2
November 13, 2015	Second revised straw proposal posted
November 20, 2015	Stakeholder meeting on second revised straw proposal
December 9, 2015	Comments due on second revised straw proposal
January 7, 2016	Draft final proposal posted
January 14, 2016	Stakeholder call on draft final proposal
January 22, 2016	Stakeholder comments due on draft final proposal
March 24-25, 2016	Board of Governors

The goal of this initiative is to continue improving aspects of the ISO's availability, outage substitution and replacement rules, and clarifying the RA process

1. Develop a template that captures and codifies RA requirements contained in an LRA's RA program documentation
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 RAIM availability assessments to Masterfile changes
6. Design the rules needed to apply the RAIM to combination flexible capacity resources
7. Streamline monthly RA showing process

# STAKEHOLDER COMMENTS

Eric Kim

# Stakeholder Comments

- LRA RA process alignment- stakeholders expressed concerns with possible tariff language changes and clarifications on what specific information the ISO is looking to collect
- Majority of stakeholders believed that a replacement resource for a flexible capacity resource on a planned outage should qualify as long as it meets the must-offer requirement

# Stakeholder Comments

- PG&E and SDG&E do not believe that a specific local capacity designation is needed
- PG&E and Six Cities suggested that the ISO explore the option to set a deadline for final NQC and EFC lists



# Stakeholder Comments

- CDWR, WPTF and SDG&E requests additional clarity regarding all Masterfile changes and the assessment under RAAIM
- Several stakeholders sought additional explanation about the ISO's proposal of a pseudo-resource

# Stakeholder Comments

- Six Cities did not have any objections to the rollover of annual plans but requested the ISO also allow for rollovers of supply plans as well
- CPUC's requested the ISO conduct seasonal local RA studies
- The Small POU Coalition's request for the ISO to provide a de minimis exception will be considered in the scope of the FRACMOO2 initiative

# LRA AND ISO PROCESS ALIGNMENT

# Proposal

- Provide LRAs and market participants clear guidance and documentation on when LRA requirements or ISO default provisions apply
  - Template that will specify the information needed regarding an LRA's RA program
  - Template does not change the provisions of an LRA's RA program, it serves only to standardize the manner in which the information is provided to the ISO
  - Most information can roll over year to year
    - A few pieces of information must be provided each year

# Updates to proposal

- The ISO will establish a deadline of 30 days prior to due date of annual RA showings to receive this data or the ISO will apply the default RA provisions that are in the ISO's tariff
- The ISO has provided a sample of the template and the default template to help provide clarity

# PLANNED OUTAGE SUBSTITUTION RULES FOR FLEXIBLE CAPACITY RESOURCES

# Proposal

- Modified from the initial “category-or-better” proposal
- Substitute capacity confirm the resource is capable of meeting the must-offer obligation for the duration of the resource outage
  - Ensure substitute provides comparable quality of flexible capacity to the resource going on planned outage
  - This is comparable to the requirement for flexible capacity on forced outages established in RSI1

## Example: Category one flexible capacity resource takes a one week planned outage

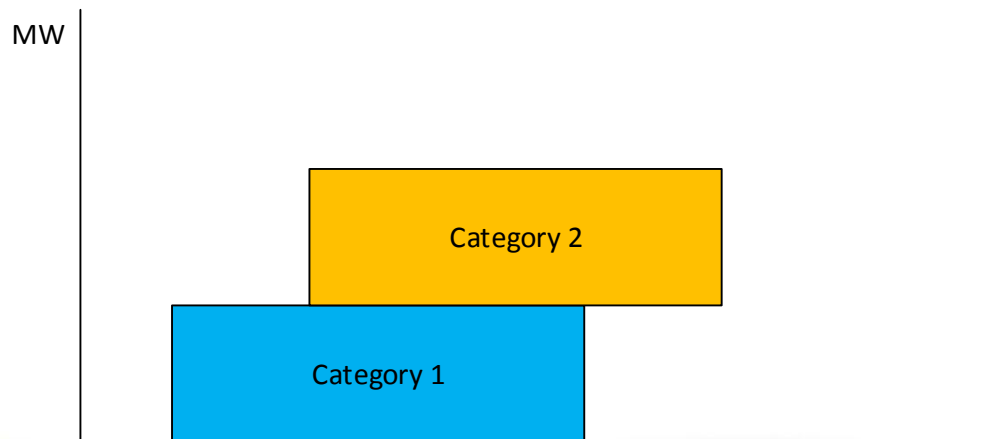
Substitute resource would have to confirm that

1. It can start or ramp twice a day for every day of the outage (i.e. has 14 starts remaining in the month if two starts per day are required of the resource or seven if one start per day is required),
2. It will be required to economically bid all flexible capacity of the resource into the day-ahead and real-time markets from 5:00 a.m. through 10:00 p.m., and
3. The ISO will evaluate all flexible capacity from the resource according to the availability rules for the category one flexible capacity must offer obligation



# Overlapping substitutions

- A resource may provide two categories of substitute flexible capacity at different but overlapping times during a month
- Once a resource has been designated at a particular category, all flexible capacity shown on that resource will be designated at the highest flexible capacity category
- It is the responsibility of the SC for the resource to notify the ISO that it should be converted to a lower category
  - Otherwise, the ISO will continue assessing the resource as a category one flexible capacity resource



# PLANNED AND FORCED OUTAGE SUBSTITUTE CAPACITY FOR RA RESOURCES IN LOCAL CAPACITY AREAS

# Proposal for local capacity resources on forced outages

- The ISO will only use the designated local capacity, not the total capacity of the resource, to determine if an LSE has shown sufficient local capacity to meet its local capacity requirements
- Allow resources in a local area procured for system RA that go on forced outage to be substituted with another system resource
- If any portion of a resource designated as a local capacity, then the whole resource would be local capacity
  - Would have to replace all capacity on outage with another local resource to avoid RAIM charges
- The ISO may consider partial local RA resources as a further enhancement in a future initiative

# Proposal for local capacity resources on forced outages

- Is the straw proposal the ISO proposed allowing resource needed for local reliability that cannot defer a planned outage to provide substitute capacity from another local capacity resource
- The ISO has continued to review the planned outage process to determine the full impact of its proposal
- The planned outage process reliability assessment is done for **all** resources requesting planned outages regardless of the resources RA status
- The ISO does not see a benefit from extending the proposed change to the planned outage substitution rules for RA resources located in a local area requesting a planned outage
  - The ISO is removing this component of its proposal

# PROCESS FOR UPDATING RESOURCES' EFC AND/OR OPERATIONAL PARAMETERS

# Updating resource EFCs during the year

- Several reasons a resource may request an EFC during the year
  - Switching from non-dispatchable to dispatchable,
  - Resource goes online,
  - Resource's NQC increases
- The ISO will update EFC only upon request from the SC for the resource
- Request must come either at the same time or after the SC submits the request to change the NQC value

## Proposal for updating resource EFCs during the year

- “Nature-of-work” outage card, which exempts use-limited resources from the ISO’s performance incentive mechanism, the RA Availability Incentive Mechanism (RAAIM), once the use limitation has been reached
- ISO proposes not to exempt use-limited resources from RAAIM with limitations that extend beyond the current month.

# Use-limited outage card RAIM treatment

- SC will submit a monthly use-limited reached outage card when a use-limited resource reaches its monthly limitation
  - Exempt from RAIM for the remainder of the month
- SC will submit an annual use-limited reached outage card when a use-limited resource reaches its annual limitation
  - Non-exempt from RAIM until it becomes available again
  - Intended to ensure sufficient capacity is still available to the markets
- Example resource has 20 starts per month and 100 starts per year.
  - Monthly limitation reached in Feb, Mar, April, and May
    - Exempt for remaining days in each month
  - Annual limitation reached in June.
    - Non-exempt in June when limitation reached

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



# APPLYING RAAIM TO MASTERFILE CHANGES

# Proposal

- The RAAIM mechanism is sufficient to address changes to the quantity of flexible capacity and no additional actions are required
- However, changes that alter the flexible capacity category eligibility, like changes to the number of starts per day, require additional treatment under RAAIM
- The ISO proposes that resources that no longer qualify for a category of flexible capacity be assessed as being unavailable under RAAIM

# COMBINATION FLEXIBLE CAPACITY RESOURCES

# Combination flexible capacity resources are currently exempt from RAAIM

- 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
- Revised tariff language in FRACMOO filing ensures that at least one of the combined resources is available to the ISO
- Needed tariff provisions and structure needed to apply the RAAIM rules to combination flexible capacity have not been developed

The appropriate way to measure the availability of combination flexible capacity resources is to assess the *total* obligation

- 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
  - System obligations are cumulative

# Appropriate way to measure availability of combination flexible capacity resources is to assess *total* obligation

- Must be able to calculate total availability obligations, system and flexible, of both resources
  - Only flexible capacity aspect of resources are combined
  - System obligations are cumulative
- Example

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

- Each resource has an system requirement that must be met
  - Total system requirement of 150 MW
- Flexibility requirement only needs to be met by one resource
  - Combined flexible requirement of 75 MW

## 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 RAIM charges or payments
- Need for pseudo-resources comes from need to capture both full system and flexible capacity obligations contained by combined resources
- No need to determine the contribution of the each resource because the resources to have the same SC
- Has no other implications to
  - Bidding behavior,
  - Dispatches, or
  - Other settlements for two resources in combination

# An example of why a pseudo-resource is needed

## Hypothetical Combination Resource

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

Assessment RAIM assessment uses highest quality MOO for resources

- Assesses compliance with MOO for 75 MW flexible capacity first
- Compliance for MOO for system capacity after compliance with flexibility MOO

If Resource A meets flexible capacity MOO, resource B also meets flexible capacity MOO

- If Resource B meets flexible capacity MOO, then it also appears to meet system MOO

Resource	Availability (Flexible)	Incremental Availability (System)	Total
Resource A	75	25	100
Resource B	75	0	75

Outage of Resource B would result in 50 MW reduction in system capacity because

- Flexible capacity exceed system capacity for Resource B
- Resource A fulfills flexible capacity obligation for Resource B

Reduction to system capacity cause by outage should be captured in RAIM



# An example of how a pseudo-resource would work

## Hypothetical Combination Resource

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

Pseudo-resource sums system obligations and combines flexible obligations

Resource	Availability (Flexible)	Incremental Availability (System)	Total
Resource C	75	75	150

Loss of system capacity caused by outage of Resource B can now be captured in RAAIM while flexible obligation is still covered by Resource A

# STREAMLINING THE MONTHLY RA SHOWING PROCESS

# The ISO proposes to automatically roll all RA showings made in annual plans into the monthly RA showing for all LSE

- As a general rule, SC representing a LSE would not be at risk of facing penalties under section 37.6 of the ISO tariff for a late or missing monthly RA plan because of rollover
  - May be subject to other charges if discrepancies are unresolved or the data provided in the year-ahead showings are not sufficient to cover all month-ahead obligations
- If an LSE's showing changes, the SC can submit new information into the monthly RA showings 45 days prior to the operating month
- If no action is taken by the LSE by 45 days prior to the operating month, the ISO will use the annual showing to for all RA assessments

ISO does not propose to automatically roll resource supply plans into the monthly showings.

- Automatically rolling over supply plans is not comparable to rolling over RA showings
- Rolling over RA showings, LSEs could eliminate unnecessary penalties
  - For supply plans automation could result in unnecessary accidental penalties
- SCs for RA resources may still enter supply plans at the same time that they are submitted in the year ahead showing

# NEXT STEPS

Julia Payton

# Timeline

- Stakeholder comments on the straw proposal are due December 9, 2015; submit to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com)
- Draft final proposal will be posted on January 7 2016
- A stakeholder call will be held on January 14, 2016