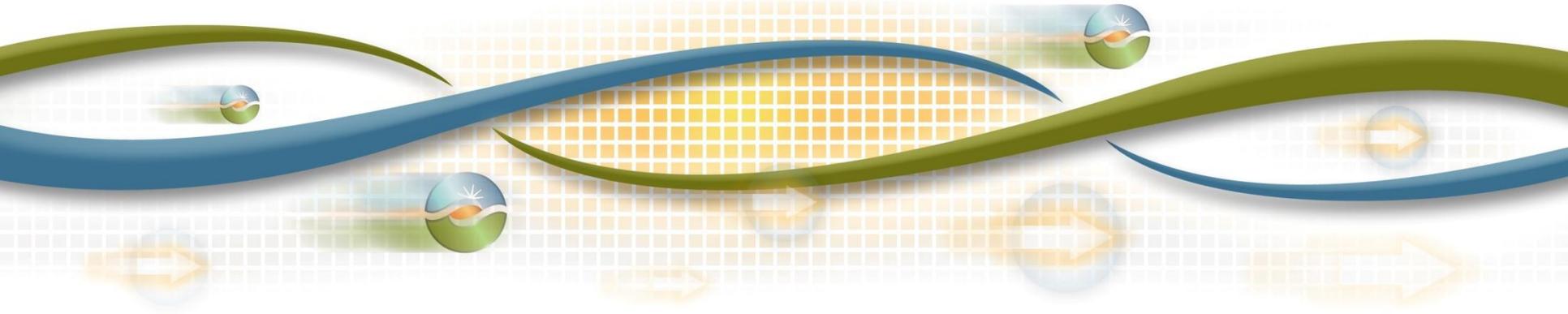


Revised Presentation

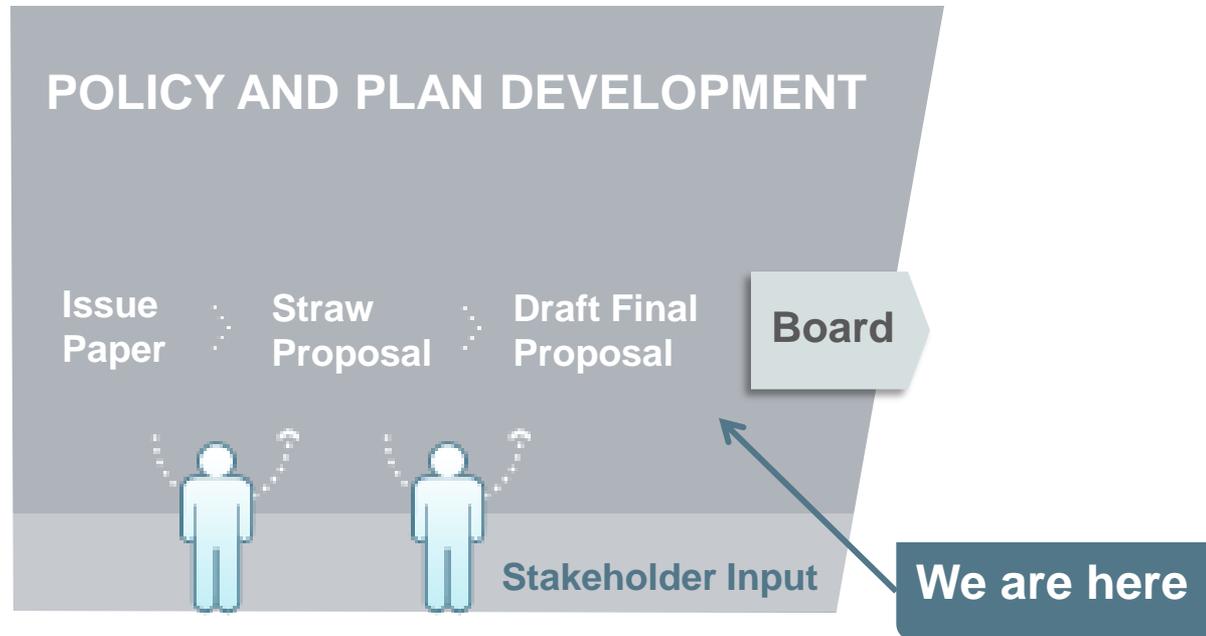
Replacement Requirement for Scheduled Generation Outages

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Stakeholder Conference Call to follow-up on comments to the
Draft Final Proposal
June 14, 2012



ISO Policy Initiative Stakeholder Process



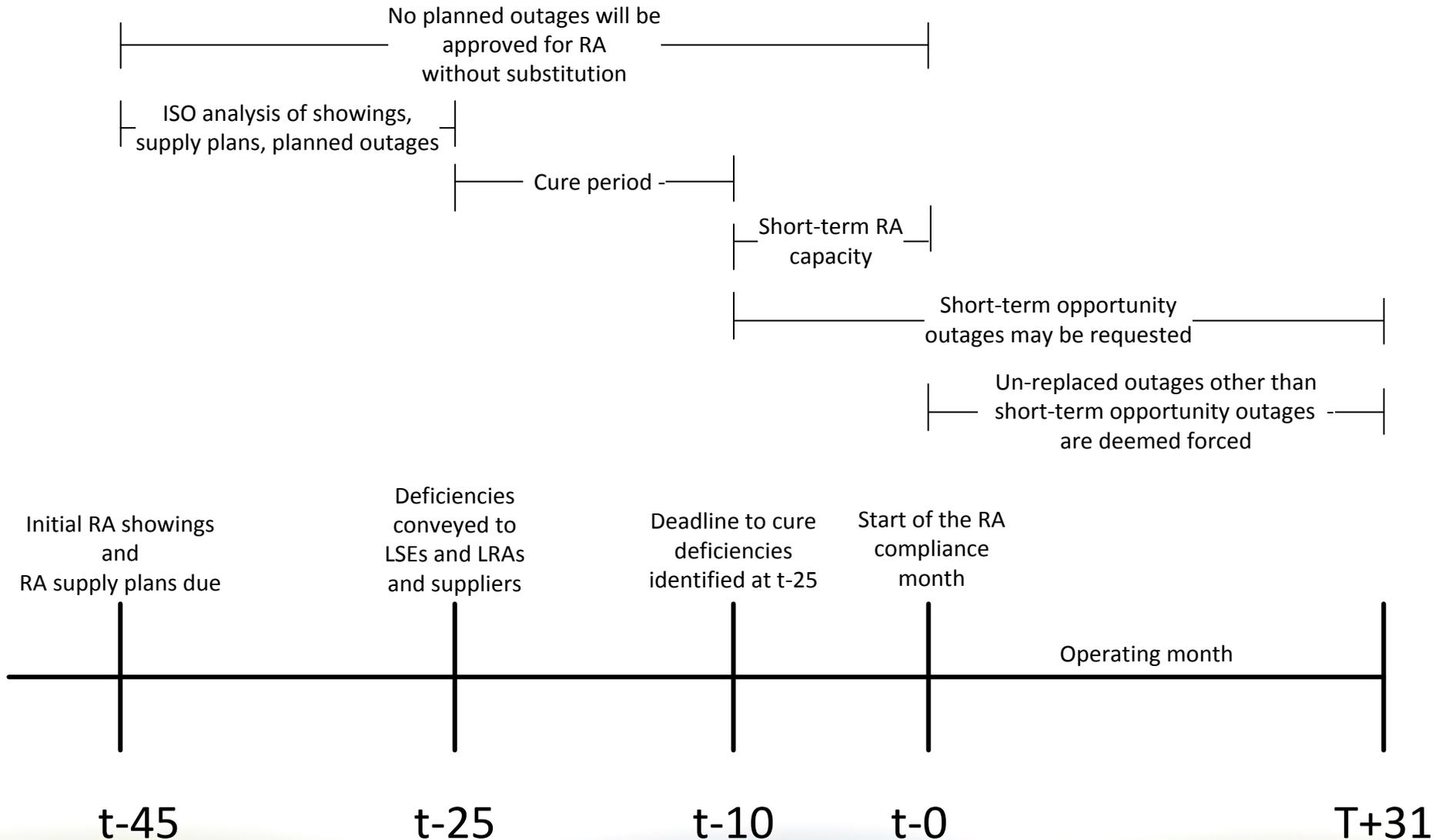
Background

- Currently, planned outage requests are evaluated based solely on reliability. The extent to which a planned outage would reduce the level of RA capacity is not considered
- The CPUC's resource adequacy replacement rule is no longer in effect as of January 1, 2013
- The ISO has endeavored to create rules for replacement that improve incentives and promote grid reliability

Summary of the draft final proposal – Six enhancements to resource adequacy

1. ISO replacement requirement for planned generation outages after the monthly RA showing
2. Showing moved from 30 to 45 days before the month
3. Resource adequacy resources can request short-term opportunity outages
4. Load serving entities can provide “non-designated” resource adequacy capacity
5. ISO backstop procurement: Short-term replacement RA Capacity
6. Electronic bulletin board to facilitate bilateral arrangement of replacement RA capacity

Overview of the timeline



Clarification to timeline

- No change to today's process by which planned outages are approved prior to RA showings **except that the 115% RA level requirement will be considered**
- RA showings are now proposed to be made at t-45
- **No planned outages for RA resources will be approved between t-45 and t-10 without substitute capacity**
- **Only short-term opportunity outages will be approved for RA resources after t-10**
- **Outages of RA resources other than approved short-term opportunity outages taken after t-10 will be considered forced**

1. Replacement requirement

- ISO will manage outages to maintain System RA level at the 115% requirement
- After initial monthly showing, planned outages will only be allowed if
 - Replacement capacity is provided
 - A short term outage is requested after t-10
- If an unresolved deficiency (as communicated to LSEs and suppliers at t-25) still exists at t-10, the ISO will then procure additional short-term RA capacity to substitute on the LSE's behalf, and allocate costs to the LSE

Clarification for replacement requirement (1)

- All LSEs come in with 115%.
- A planned outage can be approved prior to operating month
 - on a first come-first served basis, and can be approved even if the planned outage brings the LSE's RA level below 115%
 - but cannot bring the system RA level below 115%
- PG&E: Counting of capacity in CPUC “buckets 1-3” will not change
 - Note the “sub-set of hours” section of the proposal on non-resource specific system resources
 - <http://www.caiso.com/informed/Pages/StakeholderProcesses/CompletedStakeholderProcesses/GeneratedBidsOutageReporting-ResourceSpecificRAResources.aspx>

Clarifications on the replacement requirement (2)

- AReM: seeks clarification of the process for an RA supplier to follow when it requests a planned outage after the initial RA showing
 - Substitution must accompany the request for outage
- CES: final RA showings are optional
 - Only needed as a last time for an LSE to provide the ISO with a “cure” to
 - A requested planned outage without replacement
 - A mismatch between an RA showing and the RA supply plan

Clarifications on the replacement requirement (3)

- CDWR/SWP: Demand response resources, pseudo gen?
 - Doesn't really apply yet to DR. Stay tuned for SCP 3.
 - Pseudo-generators are treated just like any other generator with an RA contract
- CHP/EPUC: Unit contingent capacity
 - Responsibility for capacity replacement has already been allocated to the procuring LSE
 - ISO will respect this arrangement

Clarifications on the replacement requirement (4)

- NCPA:
 - Clarification of language
 - Planning reserve = operating reserves + forced outage rate + load forecast error
 - To reiterate clarification above
 - All LSEs come in with 115%.
 - A planned outage can be approved prior to operating month
 - on a first come-first served basis, and can be approved even if the planned outage brings the LSE's RA level below 115%
 - but cannot bring the system RA level below 115%

1 continued. Replacement for **Local** RA resources

No change from current practice!

- The annual requirement for RA capacity at 100% of forecast peak load is still in place
- For outage management purposes only, the ISO will consider
 - Local for local first, dispatchable for dispatchable
 - Other reliability measures for the local RA
 - System RA remains at or above 115%

2. Timing of monthly RA showings

- RA showing moved to 45 days prior to the start of the operating month
- The ISO concurs with the CPUC that the 45-day timeline provides for “less disruption of other RA program processes while providing the CAISO with a bit more time to manage outages”
- Supply plans will also be due 45 days before the month

Clarification on timing of RA showings

- Other dependencies that are part of the RA program
 - Load forecasts → CEC
 - Load migration → CPUC
 - RA credits → with respect to backstop procurement, provisions in section 43 of the Tariff still stand
 - Import allocation → ISO

3. Short-term opportunity outages

- Short-term opportunity outages may be requested after 10 days before the operating month and will not be considered forced outages provided the outage is...
 - requested at least 72 hours in advance
 - ~~fewer than 12 hours~~
 - during non-peak hours (WECC definition, w/o Saturday)
 - allowable based on system conditions and enables the ISO to maintain established reliability criteria
- NEW: ISO does not propose to offer a waiver for “forced” status

Clarifications to short-term opportunity outages

- NEW: Short-term outages may be for more than 12 hours
- Short-term opportunity outages must still be
 - Requested after t-10
 - Requested up to 72 hours prior to requested start of the outage
 - During non-peak hours (WECC + Saturday)
 - Subject to ISO reliability assessments
 - Note: if the outage runs over into peak hours, it is deemed forced

4. Non-designated RA capacity

- LSEs may provide “non-designated RA” capacity to be used to replace for an RA resource with scheduled planned outages
- Non-designated RA capacity listed in order of preference
- Non-designated RA used in t-45 through t-10 – that is, to correct for “deficiencies” in the initial RA showing
- Non-designated RA capacity will not be subject to SCP provisions or must-offer obligation unless they are used to substitute for designated RA capacity
- Having these potential substitute resources will allow the ISO to quickly substitute capacity for planned outages

Clarifications – definitions

- Non-RA resource / Non-RA capacity
 - Not designated as providing resource adequacy in an RA showing
- Non-designated RA capacity
 - Resource adequacy capacity provided by an LSE in addition to its list of designated RA capacity
 - Used for substitution between t-45 and t-10 in case of that LSE's planned outage results in shortage
 - Not subject to SCP, must-offer unless used for substitution

5. Short-term replacement RA capacity

- ISO will procure short-term replacement RA capacity
 - After t-10 final RA showing (i.e. after the cure period)
 - When LSE/generator has failed to provide replacement capacity for an RA resource on planned outage which requires replacement
- Costs of the short-term replacement RA capacity will be allocated to the LSE requiring replacement capacity

More 5 – Short-term replacement RA capacity

- LSEs with “non-designated RA” may offer that capacity for short-term replacement RA capacity in addition to having it “standing by” to substitute for their own planned outages
- Short-term replacement RA capacity can be from 1 day to 31 days
- The capacity payment to the short-term replacement RA capacity will be equal to the *pro rata* (daily) of CPM payment multiplied by the number of days the resource provides replacement capacity

Clarifications short-term replacement RA capacity (1)

- SCE: Requested clarification of the term “procure”
 - The ISO will procure capacity for ST backstop to ensure 115% requirement is met
 - Same arrangement as current CPM provisions
- Units providing short-term RA Replacement Capacity
 - Can include resources from non-designated RA
 - Can include generators without RA contracts
 - Must be willing to accept a short-term RA replacement capacity award for as little as one day

Clarifications short-term replacement RA capacity (2)

- For short-term RA replacement capacity
 - ISO will use the same CPM criteria to select the unit
 - The price the ISO would offer is fixed at the *pro rata* CPM value
 - To back-stop for a particular LSE, the ISO will first look to that LSE's non-designated RA capacity
 - If none is available, the ISO will evaluate all available resources (using same criteria as CPM) including non-designated RA resources that have capacity that can be designated as resource adequacy capacity
 - Any payments to an RA contracted resource go to the LSE

Clarifications short-term replacement RA capacity (3)

- If neither the LSE nor the generator addresses requested replacement capacity identified after the initial RA and supply plan showings **by t-10**,
 - The ISO will procure short-run RA replacement capacity to provide the replacement capacity and bill this to the LSE
 - Incentive for RA showings that reflect available capacity

Short-term replacement RA capacity is procured at t-10 to cure any remaining deficiencies that were communicated to LSEs and suppliers at t-25

6. Electronic bulletin board

- Online forum in which market participants can list/identify potential replacement RA capacity
 - Lists potential sources for substitute capacity during cure period or for forced outages within the month
- No change: information regarding the substitute capacity must be communicated to the ISO as is the practice today
- LSEs who submit “non-designated RA” can agree to be listed on a bulletin board
- Parties may sell this capacity for replacement RA capacity for 1 day to 31 days of the month
- Bilateral negotiations for replacement capacity

Clarifications on the electronic bulletin board

- The bulletin board is open to non-designated RA capacity and generation capacity not under an RA contract
- When seeking short-term RA replacement capacity, the ISO will evaluate all available resources (using same criteria as CPM)
 - Not solely the resources on the bulletin board, or resources with non-designated RA capacity

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