

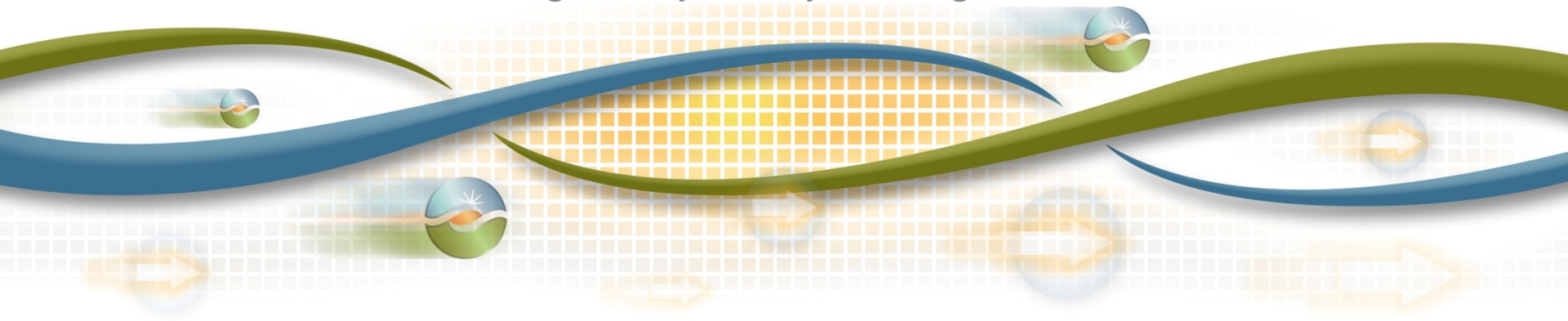


# Temporary Shutdown of Resource Operations

## Draft Final Proposal

Stakeholder Conference Call  
September 13, 2017  
1:00 – 4:00 p.m. Pacific Time

Keith Johnson  
Infrastructure and Regulatory Policy Manager



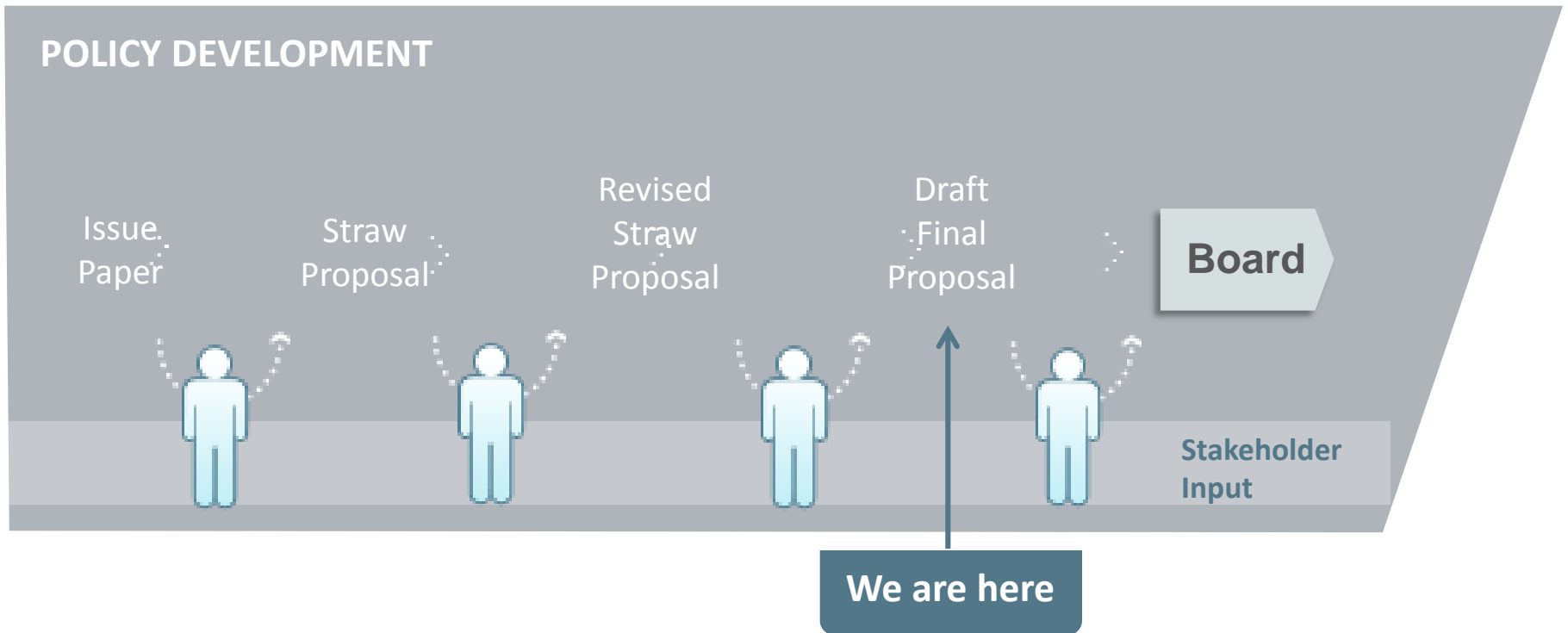
# Agenda

Time	Item	Speaker
1:00-1:10	Plan for Stakeholder Engagement	Kristina Osborne
1:10-1:20	Scope of Initiative and Background	Keith Johnson
1:20-1:40	Stakeholder Comments on Straw Proposal	Keith Johnson
1:40-2:00	Changes from Straw Proposal	Keith Johnson
2:00-3:10	Draft Final Proposal for Temporary Shutdowns	Keith Johnson Danny Johnson
3:10-3:50	Draft Final Proposal for Retirement Process	Deb Le Vine
3:50-4:00	Next Steps	Kristina Osborne

# PLAN FOR STAKEHOLDER ENGAGEMENT

# Stakeholder Process

## Temporary Shutdown of Resource Operations



# Stakeholder Process Schedule

## Temporary Shutdown of Resource Operations

Document	Date	Milestone
Issue Paper	May 10	Post issue paper
	May 19	Hold stakeholder call
	May 30	Stakeholder written comments due
Straw Proposal	June 21	Post straw proposal
	June 28	Hold stakeholder call
	July 13	Stakeholder written comments due
Draft Final Proposal	September 6	Post draft final proposal
	September 13	Hold stakeholder call
	October 3	Stakeholder written comments due
Final Proposal	November 1-2	Present for approval at Board meeting



# SCOPE OF INITIATIVE AND BACKGROUND

CAISO committed to undertake this initiative during the FERC process related to a now-denied complaint.

- On June 17, 2016, La Paloma Generating Company filed a complaint against CAISO
- It submitted multi-month outage requests for several units because it did not anticipate continued operation of units would be economic
- CAISO denied requests because
  - Outage requested on economic, rather than physical reasons
  - Request did not represent appropriate use of outage management system as allowed by CAISO tariff

## Complaint (continued).

- On October 3, 2016, FERC ruled CAISO's denial of outages was reasonable under CAISO tariff
  - Only permissible reasons for outage include planned maintenance, new construction or other work
  - Cannot grant requests for outages for economic reasons
- Parties suggested FERC order CAISO to revise its tariff
  - To allow for outages based on economic considerations
  - Procure capacity if CAISO denies outage request - at least in case of non-resource adequacy ("RA") capacity
- CAISO agreed to undertake a stakeholder process in 2017



# Scope of TSRO initiative.

- This initiative will look at
  - Conditions under which CAISO may permit a resource to temporarily shut down operations for non-physical reasons, including economic reasons
  - Compensation, if any, CAISO would pay a resource if CAISO denies a request for shutdown

# STAKEHOLDER COMMENTS ON STRAW PROPOSAL

# Stakeholder Comments on RA Treatment of Resource that has switched its Operations to Outside BAA.

- Stakeholders support a rule where a resource that has switched its operations from inside CAISO BAA to outside of CAISO BAA cannot be counted as internal RA capacity on a RA showing

## Stakeholder Comments on Whether Resource on Temporary Shutdown can serve as RA Capacity.

- Nearly all stakeholders support a rule that a resource that is shut down should not be able to qualify as RA for the period it is shut down

## Stakeholder Comments on Eligibility to apply for Temporary Shutdown.

- Most stakeholders support proposal that any resource should be able to request a shutdown during a period in which it is not a RA, CPM or RMR resource

# Stakeholder Comments on Whether the CAISO should allow Resources to Temporarily Shut Down.

- Resource owners and some LSEs support allowing temporary shutdowns for non-physical reasons, including economic reasons
- PG&E opposes a TSRO regime out of concern that its introduction skews incentives and may lead to unintended consequences
- SDG&E supports granting a TSRO outage due to economic reasons only as a first step of retirement process and should not be granted just because a resource estimates it may be uneconomic to operate

## Stakeholder Comments on Conditions under which CAISO may grant a Request for Shutdown.

- Majority of stakeholders support granting request if it does not endanger reliability
- CPUC is concerned that large amounts of non-RA, RMR or CPM resources may request shutdown in same timeframe
- SDG&E believes shutdown should only be granted if resource is headed toward retirement

# Stakeholder Comments on Reliability Evaluations.

- Resources support the level of detail provided in straw proposal
- CPUC and some LSEs request more detail on assessments that will be performed and methodology
- SDG&E requests not using a first-come first-served process for assessing requests - instead evaluate in a cluster



# Stakeholder Comments on Compensation.

- Resources want at least CPM soft offer cap price (or higher price if FERC approves it)
- Some stakeholders request cost-of-service pricing or compensation for the savings resource could have realized by taking a shutdown
- Resources want whole unit compensation and compensation for entire period of requested outage
- Some LSEs believe resource must submit a bid into CPM CSP auction to be eligible to be paid if a request is denied – making CPM mandatory
- Resources believe acceptance of CPM should be voluntary
- LSEs request mechanism to provide RA credits to LSEs
- Stakeholders request information on how cost allocation will work
- SCE requests that shutdown be mandatory if request for shutdown is approved

## Stakeholder Comments on Process and Timeline.

- CPUC asks how long a resource has to accept or decline a TSRO designation
- NRG believes it is unfair that request must be submitted 60 days in advance, but decision will be known only 8 days from requested effective date
- SCE and SDG&E believe a window approach and not a first-come first-serve approach should be used
- SDG&E believes CAISO should report results of all requests for shutdown and not just denied requests that received CPM payment

# Stakeholder Comments on Return to Service Requirements.

- Resources do not support a 10-day return to service
- CPUC requests definition of what an emergency is
- PG&E requests methodology for determining if a resource has to come back from shutdown for emergency and consequences if it does not come back in 10 days
- SDG&E supports not allowing a resource to come back after its TSRO at a capability less than what it was when it went out on TSRO
- NRG believes a resource should be able to come back at any level of capability, subject to testing

## Stakeholder Comments on Minimum and Maximum Time Limits for Shutdown.

- Some LSEs support straw proposal of two months minimum and four months maximum
- Resources want a longer minimum and maximum than proposed in straw proposal - a minimum as long as one calendar year
- SDG&E wants a longer minimum period - six to nine months - as SDG&E views TSRO as first step towards retirement

# CHANGES FROM STRAW PROPOSAL

## CAISO has made 26 changes to June 21 straw proposal to create the draft final proposal.

1. Clarified there will be no requirement that resource owner show that resource is in economic distress or it is uneconomical for owner to operate resource
2. Clarified that it is intended that if resource owner requests a temporary shutdown it is for entire unit and capability of unit
3. Clarified that shutdown will be available only to resources that are not a RA, RMR or CPM resource
4. Clarified that resource that is “partial RA” in a month is not eligible to request a shutdown for that month

## Changes (continued)

5. Added resource must attest it is not RA, RMR or CPM resource for period it is requesting and if it should become such during any period of a denied shutdown it will immediately notify CAISO
6. Clarified resource must be operating as part of CAISO's BAA to be eligible to apply for shutdown
7. Modified duration - Request can be for no longer than one month at a time May through October and no longer than four months at a time November through April, with minimum length of time of one month
8. Clarified resource will not be limited in how many times it can request a shutdown and no limit on non-consecutive outages

## Changes (continued)

9. Added if resource is on shutdown for continuous one-year period and does not want to go back into service, it will not be approved for an additional month of shutdown - resource can choose to enter into retirement process if it wants to extend period of time not available to grid
10. Added a request for shutdown can be submitted no more than 90 days prior to requested effective date of shutdown
11. Revised description of how CAISO will perform its reliability assessment of requests for shutdown
12. Added if reliability assessment determines resource can go out on shutdown without reliability impacts, CAISO will grant request and resource must go out on shutdown for full period requested



## Changes (continued)

13. Added that approved shutdowns will be included in daily outage report and type of information included
14. Added to receive payment for denied request resource must have submitted at time it submits its request bids for use in Monthly CPM CSP, in advance, for all months for which it is requesting shutdown
15. Added payment price for denied request will be price resource has submitted into Monthly CPM CSP for specific month for which shutdown is requested
16. Added payment amount for denied request will be whole unit MW of capacity of resource for period of requested shutdown, and treatment of resources with multiple units under a single resource ID

## Changes (continued)

17. Added if CAISO denies request for any month within shutdown period requested will provide CPM payment for whole unit for all months requested
18. Clarified CPM payment that will be paid when reason for denying requested shutdown is system reasons and non-system reasons
19. Added resource will be required to accept CPM designation if CAISO denies shutdown request
20. Clarified how CAISO will report CPM procurement resulting from a denied request

## Changes (continued)

21. Clarified how cost allocation will be done for CPM procurement resulting from denied request
22. Clarified how CAISO, in coordination with CPUC, other LRA or federal agency with jurisdiction over the LSE, will provide a mechanism for LSEs to receive credit for procured CPM TSRO capacity towards meeting their RA requirements
23. Clarified what CAISO will do if determined that reliability concerns warrant asking a resource if it is willing to return to service early from approved shutdown
24. Clarified that resources on shutdown will be subject to current tariff requirements and must immediately inform CAISO of any change in capability of resource

## Changes (continued)

- 25. Clarified that resource should not use shutdown to dismantle or repower a facility and instead should use other established processes
- 26. Added section that describes a change to existing retirement process where CAISO proposes to add a scenario 4 in which a resource that wants to potentially retire and has not yet determined its next steps may request a scenario 4 potential retirement treatment

# DRAFT FINAL PROPOSAL FOR TEMPORARY SHUTDOWNS

CAISO is proposing to allow a resource owner to temporarily shut down operation of its resource.

- Resource can do so for non-physical reasons, including economic reasons
  - Provided there is no reliability impact
- No requirement that resource show it is in economic distress or it is uneconomical to operate resource
- Resource can request for any reason, at its discretion
- If resource requests shutdown it is intended to be for entire unit and capability

## Shutdown will be available only to certain types of resources.

- Shutdown will not be available to resource that is RA, RMR or CPM
- RA resource is resource that is shown as RA capacity in RA showing, or capacity that has been procured under RA contract for that period but may not yet be shown on RA showing
- Resource that is “partial RA” is not eligible to request shutdown
- When submitting a request, resource must attest that it is not RA, RMR or CPM for period it is requesting a shutdown, and if it should become such during any period of a denied shutdown it will immediately notify CAISO
- Resource must be operating as part of CAISO’s BAA to be eligible to apply for shutdown, which excludes dynamically scheduled and pseudo-tie resources

## RA treatment of resources on temporary shutdown.

- A resource on shutdown is not eligible to be counted as RA capacity in a RA showing or as RA capacity for any day that it is on an approved shutdown outage
- If a resource has shut down operations in CAISO BAA and is now operating in an adjacent BAA, it will not be eligible to be used as an internal RA resource in a RA showing for the period it has shut down operations in CAISO BAA



# A resource will need to request a shutdown using the CAISO outage management system.

- Resource can request shutdown at any time during year
- Request can be for no longer than one month at a time in peak demand months of May through October and no longer than four months at a time in non-peak demand months of November through April
- Minimum length of time for a request is one month
- Resource can submit multiple subsequent requests for shutdown

## There are some limits on temporary shutdown outages.

- Resource owner will not be limited in how many times it can request a temporary shutdown outage, either consecutive one-month (May through October) or four-month (November through April)
- Will be no limit on non-consecutive outages.
- However, if resource is on shutdown for continuous one-year period and does not want to go back into service after that, resource will not be approved for an additional period of shutdown
  - Resource owner can choose to enter into retirement process if it wants to extend the period of time it is not available to the grid

## Timing of requests for shutdown.

- Resource applying for shutdown must submit its request a minimum of 60 days in advance of requested effective date of the shutdown
- Request can be submitted no more than 90 days prior to requested effective date of the shutdown

CAISO will conduct reliability assessment between T-60 and T-8 days prior to requested effective date.

- Process is not a first-come first serve process
- Will assess all pending requests for that effective date and perform a capacity check at T-8
- Resource can have overlapping temporary shutdown outage requests
- Resource cannot have overlapping actual outage duration dates

CAISO will assess requests and allow maximum amount of approvals consistent with efficient use and reliable operation of grid.

- TSRO requests will not be considered in conjunction with maintenance outages
  - Doing so would impede ability to allow for regular maintenance outages consistent with good utility practice
- Will notify resource of approval or denial no less than eight days prior to requested effective date

# CAISO will perform a reliability assessment in the Operations Planning Time Horizon.

- In accordance with Peak Reliability Coordinator (“PEAK RC”) System Operating Limit (“SOL”) methodology and outage coordination process
- Previously approved transmission and generation outages will be considered as part of the default study assumptions and system topology
- N-1, credible N-2, T-1 and G-1 contingencies will be applied to initial condition, with criteria for approval being expected system performance as defined in PEAK RC SOL Methodology
  - In applying performance threshold, analysis will be conducted to determine if requested shutdown will decrease system security by constraining ability to mitigate a potential reliability issue through a feasible market solution
  - References single line, transformer, and generator contingency, as well a Transmission Operator defined credible multiple-line contingencies

## CAISO will also conduct a capacity analysis.

- Will check to ensure that requested shutdown does not reduce available system capacity to a level below what CAISO operations expects is need to maintain reliable operation
- This additional margin will be based on CAISO's assessment of expected operating conditions, including up to a 1-in-10 load forecast plus required operating reserves

CAISO will grant the request for a shutdown if there are no reliability impacts to the grid.

- If reliability assessment determines resource can go out on shutdown without reliability impacts, CAISO will grant request
- Resource must go out on shutdown for full period requested
- Resource cannot withdraw its request or change its mind after CAISO has completed its study and made its determination



Approved temporary shutdowns will be recorded in the CAISO outage management system.

- Approved shutdowns will be included in CAISO daily outage report as is currently done for planned and forced outages
- With same information reported as for those other two types of outages

If CAISO has to deny a request it will pay the resource a CPM payment to keep the resource in service.

- To receive a payment resource must have submitted at time it submits its request for shutdown bids for use in Monthly CPM CSP, in advance, for all of the months for which it is requesting a shutdown
- CAISO will retain bids submitted for each month so CAISO can later use that information to
  - Determine CPM payments for denied TSRO requests
  - If necessary, determine CPM payment CAISO would offer to a resource that is out on approved shutdown to return to service early to meet reliability needs

## Compensation for a denied request for shutdown.

- Price will be price resource has submitted into Monthly CPM CSP for specific month for which shutdown is requested
- Payment will be whole unit MW of capacity of resource and for period of requested shutdown
  - For resources with multiple units under single resource ID, for example, a combined cycle unit, CAISO will provide CPM payment for denied request for only units associated with a configuration that is needed to support reliably operation
- If CAISO denies request for any month within the shutdown period requested, CAISO will provide a CPM payment for whole unit for all of the months requested
- Maximum possible CPM payment will be for four months

# Term of payment

- For shutdown requested during May through October, if reason for denying is for
  - System reliability, resource will receive CPM payment for that one month
  - Local reliability, resource will receive CPM payment for that month and subsequent month (two months, which is consistent with current tariff rule for CPM Exceptional Dispatch payments)
- For shutdown requested during November through April, if reason for denying is for
  - System reliability, resource will receive CPM payment for at least one month (and depending on length of outages requested it could be up to four months)
  - Local reliability, resource will receive CPM payment for at least two months (and depending on the length of outages requested it could be up to four months)

Resource must accept an offered CPM and CAISO will inform stakeholders.

- Resource will be required to accept a CPM designation if CAISO denies shutdown request
  - Acceptance of CPM designation will be mandatory
- CAISO will issue market notice and designation report for any CPM procurement resulting from a denied shutdown request
  - Reporting will be same as is currently done for other forms of CPM procurement

## Cost Allocation.

- Cost allocation will be consistent with current CPM tariff in that if CAISO denies a shutdown outage for system reason cost of CPM procurement will be spread to all of the TAC areas of CAISO BAA
- If CAISO denies a shutdown for a non-system reason, cost of CPM procurement will be spread to the TAC area(s) in which the resource is required to maintain reliability

## RA Credits.

- If CPM TSRO designation is longer than a month, CAISO will provide a mechanism for LSEs to receive credit for procured CPM towards their RA requirements in proportion to how costs of designation are allocated
- Consistent with current tariff section 43A.9(f), CAISO will coordinate with CPUC, other LRA or federal agency with jurisdiction over the LSE regarding RA credits
- If shutdown request is denied for system reasons, that LSE, subject to its LRA's decision, will be credited towards system RA
- If shutdown request is denied for non-system reasons, that LSE, subject to its LRA's decision, will be credited towards local RA so long as the resource procured is in a local area

## CAISO will offer a resource payment to return to service early from an approved shutdown.

- If CAISO determines reliability concerns warrant asking resource if it is willing to return to service early from an approved shutdown, CAISO will offer resource a CPM payment plus an adder for costs incurred to bring resource back online early
- CPM payment will be determined using Monthly CPM CSP bid information that resource is required to submit in advance for all of the months of its requested shutdown
- CAISO will use current CPM criteria for selecting from among multiple resources to identify resources for possible early return



# Treatment of TSRO Outages

Type of Request	Max Time Allowed	Request Deadlines	Who Does Study	Reported as Outage in Outage Management System ("OMS")	Must Submit Bids or Schedule	Subject to Exceptional Dispatch	Must Staff Plant	Must Maintain State of Readiness	Remove Unit from PGA*	Dis-Associate from Scheduling Coordinator	Remove Unit from Meter Service Agreement
Temporary Shutdown of Resource Operations	One-month for May-Oct  Up to four-months for Nov-Apr	60 days in advance of requested effective shutdown date	Operations	Yes	No	No	No	No	No	No	No

\* Note: "PGA" is Participating Generator Agreement.

# DRAFT FINAL PROPOSAL FOR RETIREMENT PROCESS

# Current BPM for Generator Management lays out four scenarios for resources that are considering retirement.

- Scenario 1 - Retiring resource wishes to reserve its deliverability and has either
  - Been approved for affidavit repowering process, or
  - Entered interconnection queue to be studied for repowering
- Scenario 2 - Retiring resource wishes to reserve its deliverability but has not yet
  - Committed to or completed assessment for repowering, or
  - Entered interconnection queue after determination it is ineligible for affidavit repowering process
- Scenario 3 - Retiring resource will not repower and has no need to reserve its deliverability
- Scenario 4 – Resource wants to mothball as it has not yet determined its next steps

BPM currently defines steps a resource is required to take under each scenario.

- A potentially retiring resource has several conditions it must fulfill to maintain its deliverability on grid
  - Applicable agreements must be revised
  - Resource must demonstrate actively engaged in construction of replacement generation within three years of retiring to retain its deliverability status
  - Annually CAISO will check on status of repowering progress
  - Resource can be in mothball status for no longer than two interconnection cluster application windows (a maximum of two years)

## The BPM currently defines timing considerations for retirement.

- Resource must provide notice to CAISO
  - If resource is repowering and desires to retain its deliverability, 60 calendar days in advance of retiring so that CAISO can determine if resource is needed for reliability
  - If resource is permanently retiring and does not want to retain its deliverability, 90 calendar days in advance of retiring so that CAISO can determine if resource is needed for reliability
- If resource does not operate at end of three-year period or cannot demonstrate that it is in active construction then it loses its deliverability status

The draft final proposal for this TSRO initiative refines how scenario 4 potential retirement will work.

- Removes the term “mothball”
- Revises current scenario 4 whereby a resource that wants to potentially retire and has not yet determined its next steps may request a Scenario 4 potential retirement treatment
- Under a Scenario 4 potential retirement, resource must remain off-line for at least one year
- Clock for the MW amount of Deliverability that can be retained will be determined by CAISO at time potential retirement notice is submitted

## A Scenario 4 resource is potentially retiring and maintaining the resource, but undecided on next steps.

- Resource can potentially retire and retain Deliverability for no longer than next two generator interconnection Queue Cluster application windows following CAISO's receipt of a potential retirement request
- Since no study assumptions are changed, no study should be necessary for return to service
- If generating characteristics change in some way, resource will need to request approval for that change through post-commercial operation date modification process in their existing Generator Interconnection Agreement or switch to a repowering retirement scenario
- Prior to expiration of timeline, first site repower application or Interconnection Request must be received, or certified Scheduling Coordinator retained and meters re-inspected

# Treatment under Scenario 4.

Type of Request or Scenario	Max Time Allowed to Retain Deliverability	Request Deadlines	Who Does Study	Reported as Outage in OMS	Must Submit Bids or Schedule	Subject to Exceptional Dispatch	Must Staff Plant	Must Maintain State of Readiness	Remove Unit from PGA	Dis-Associate from SC	Remove Unit from Meter Service Agreement
Retirement #4 (potential retirement, no decisions on next steps have been made, could re-start unit)	Max of 3 years. After 2 years gen must decide its next steps.	At least 60 days prior to effective date	Planning	No	No	No	No	No	Yes	Yes	Yes

“OMS” is Outage Management System  
 “PGA” is Participating Generator Agreement  
 “SC” is Scheduling Coordinator



# NEXT STEPS

## Next Steps

- Request stakeholders submit written comments by close of business on October 3
  - Use template provided on website at: [Comment Template](#)
  - Submit to mailbox: [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com)