California ISO

Temporary Shutdown of Resource Operations

Draft Final Proposal

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Market & Infrastructure Policy

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Appendix 1 Stakeholder Written Comments on Straw Proposal

1. Executive Summary

The California Independent System Operator ("CAISO") committed to hold a stakeholder process in 2017 to explore opportunities to potentially accommodate a resource owner taking a resource out of service for an extended period of time when the resource owner believes that economic conditions cannot support its continued operation.[1] This paper presents the CAISO's draft final proposal for the Temporary Shutdown of Resource Operations ("TSRO") initiative.

This initiative will consider the conditions under which the CAISO may permit a resource owner to take a resource temporarily out of service for non-physical reasons, including for economic reasons, and what form of compensation, if any, the CAISO will provide if it denies a resource owner's request to take its resource out of service.

This draft final proposal describes the plan for stakeholder engagement, scope of the initiative and background, stakeholder written comments received and CAISO responses, changes from the June 21, 2017 straw proposal, and the draft final proposal.

The key elements of the draft final proposal are described below.

- The CAISO will allow a resource to temporarily shut down operation of its resource for non-physical reasons, including economic reasons, provided there is no reliability impact to the grid as determined by a CAISO reliability assessment.
- The resource will need to apply for the shutdown using the CAISO's outage management system. Requests for shutdown will be available only to a resource that is operating as part of the CAISO's balancing authority area ("BAA") and is not a resource adequacy ("RA"), Reliability Must-Run ("RMR") or Capacity Procurement Mechanism ("CPM") resource.
- A resource can request a shutdown at any time during the year.
- A request can be for no longer than one month at a time in the peak demand months of May through October and no longer than four months at a time in the non-peak demand months of November through April. The minimum length of time for a request is one month. A resource can submit multiple subsequent requests.
- The resource must submit its request a minimum of 60 days in advance of the requested effective date of the shutdown. The CAISO will conduct a reliability assessment between T-60 and T-8 days prior to the requested effective date of the shutdown and will allow for the maximum amount of approvals consistent with the efficient use and reliable operation of the CAISO grid. The resource will receive approval or denial of the request no less than eight days prior to the requested effective date.

[1] The CAISO made this commitment to the Federal Energy Regulatory Commission ("FERC") in response to the June 17, 2016 complaint filed by the La Paloma Generating Company related to the CAISO's denial of an outage La Paloma proposed for economic reasons.

- If the reliability assessment determines that the resource can go out on shutdown without reliability impacts to the grid, the CAISO will grant the request. The resource must then go out on shutdown for the full period requested.
- If the reliability assessment determines that the resource cannot go out on shutdown without reliability impacts to the grid, the CAISO will deny the request and pay the resource a CPM payment to keep the resource in service. The payment price for a denied request will be the price the resource has submitted into the Monthly CPM competitive solicitation process ("CSP") for the specific month for which the shutdown is requested. The payment amount will be the whole unit MW of capacity of the resource and for the period of the requested shutdown. The resource will be required to accept a CPM designation if the CAISO denies the request.
- During an approved shutdown, since the resource will not have been paid to be available, the resource will not have to respond to Exceptional Dispatches issued by the CAISO and cannot be called out of shutdown status due to "no touch' operating conditions on the grid.
- The cost of the CAISO procurement will be spread to all load in the affected Transmission Access Charge ("TAC") area or areas, as applicable.
- If the CAISO procurement is longer than a month, the proposal allows that LSEs can receive credit for the procured capacity towards meeting their RA requirements (this will be done in coordination with Local Regulatory Authorities – "LRAs").
- If the CAISO determines that reliability concerns warrant asking a resource that is currently on an approved shutdown if it is willing to return to service early from its shutdown, the CAISO will offer the resource a CPM payment plus an adder for costs incurred to bring the resource back online early.
- The resource will not be eligible to be used as a RA resource in a RA showing for the period that it has temporarily shut down operations in the CAISO's BAA.

2. Plan for Stakeholder Engagement

The schedule for this initiative is presented in Table 1 below. The CAISO plans to present its final proposal to the CAISO Board of Governors for their approval at their meeting on November 1-2, 2017.

Table 1 – Schedule for TSRO Stakeholder Initiative

Stage	Date	Milestone
Kick-Off	May 4, 2017	Issue market notice announcing this new initiative
Issue Paper	May 10	Post issue paper
	May 19	Hold stakeholder call
	June 6	Stakeholder written comments due
Straw Proposal	Jun 21	Post straw proposal
	Jun 28	Hold stakeholder call
	Jul 13	Stakeholder written comments due
Draft Final Proposal	Sep 6	Post draft final proposal
	Sep 13	Hold stakeholder call
	Oct 3	Stakeholder written comments due
Final Proposal	Nov 1-2	Present final proposal to CAISO Board for approval

3. Scope of Initiative and Background

This initiative will consider the circumstances under which the CAISO may permit a resource owner to temporarily shut down operation of its resource for non-physical reasons, including economic reasons, and what form of compensation, if any, the CAISO should provide if it denies a resource owner's request for a temporary shutdown. A detailed discussion of the scope and background of this initiative was provided in the June 21, 2017 straw proposal and will not be reproduced here. See June 21, 2017 Straw Proposal.

4 Stakeholder Comments and CAISO Responses

This section provides a high-level summary of the stakeholder comments that were received on the June 21, 2017 straw proposal, as well as the CAISO's responses to those comments. The full version of the written stakeholder comments that were submitted on the straw proposal is provided in Appendix 1.

1. **RA Treatment of a Resource that has Switched its Operations to a BAA Outside of the CAISO BAA** – Stakeholders support a rule where a resource that has switched its operations from inside the CAISO BAA to outside of the CAISO BAA cannot be counted as internal RA capacity on a RA showing.

   CAISO Response –The CAISO and stakeholders agree on this element of the proposal and the CAISO continues to support this rule in this draft final proposal.

2. **<u>Whether Resource on Temporary Shutdown can serve as RA Capacity</u>**: Nearly all stakeholders support a rule that a resource that is shut down should not be able to qualify as RA for the shutdown period.

   <u>CAISO Response</u> – The CAISO and stakeholders agree on this element of the proposal and the CAISO continues to support this rule in this draft final proposal.

3. **<u>Eligibility to apply for Temporary Shutdown</u>**: Most stakeholders support the CAISO's proposal that any resource should be able to request a shutdown during a period in which it is not RA, CPM or RMR.

   <u>CAISO Response</u> – Most stakeholders agree with this element of the proposal and the CAISO continues to support this rule that any resource should be able to request a temporary shutdown outage during a period in which it is not RA, CPM or RMR. Also see the CAISO's response below to the next comment.

4. **<u>Whether the CAISO should allow Resources to Temporarily Shut Down</u>**: Stakeholders have mixed views on this issue. Resource owners and some LSEs support the CAISO allowing temporary shutdowns for non-physical reasons, including economic reasons. PG&E opposes the promulgation of a TSRO regime, primarily out of concern that its introduction skews incentives and leads to unintended consequences. SDG&E supports granting a TSRO outage due to economic reasons only, as a first step of the retirement process to allow resources time to fully evaluate a retirement decision and a TSRO should not be granted just because a resource estimates that it may be uneconomic to operate during certain times of a year.

   <u>CAISO Response</u> – Many stakeholders agree with this element of the proposal and the CAISO continues to propose allowing temporary shutdowns for non-physical reasons, including economic reasons. The CAISO believes that it is appropriate to allow these kinds of outages for resources that are not RA, CPM or RMR. This draft final proposal includes additional provisions that the CAISO believes will mitigate potential unintended consequences and/or the potential abuse of requests for temporary shutdown outages.

5. **<u>Conditions under which CAISO may grant a request for Shutdown</u>**: The majority of stakeholders support granting a request for a temporary shutdown if granting a shutdown does not endanger reliability. However, the CPUC is concerned that large amounts of non-RA resources may request permission to temporarily shut down in the same timeframe and seeks to understand how the CAISO will deal with this situation. SDG&E believes the CAISO should only grant a temporary shutdown if the resource is headed towards retirement.

   <u>CAISO Response</u> – Many stakeholders agree with this element of the proposal and the CAISO has developed conditions under which the CAISO may grant a request for a temporary shutdown. One safeguard within the draft final proposal is that if a resource requests a temporary shutdown, and the request is approved, the resource must go out on outage consistent with its request. This element is intended to mitigate the potential for "discovery" and the abuse of the temporary shutdown outage provisions. Another

element is that if a resource is on temporary shutdown for a continuous one-year period and does not want to go back into service after that one-year period, the resource will not be allowed to be approved for an additional month of temporary shutdown. At that time the resource owner can choose to enter into the retirement process if it wants to extend the period of time it is not available to the grid. The resource owner can then choose which retirement process scenario best meets its needs. The retirement process provides an option where a resource can be out of service for up to several years and can return to service if it desires (see section 7 of this draft final proposal).

6. **Reliability Evaluations**: Resource owners support the level of detail that was provided in the straw proposal. However, the CPUC and some LSEs request that the CAISO provide more detail on the reliability assessments that will be performed and the methodology. SDG&E requests that the CAISO not use a "first-come, first-served" process for assessing requests, and instead evaluate resources in a cluster to ensure the most effective and lowest cost outcomes.

   CAISO Response – The CAISO provides additional detail in this draft final proposal on how the reliability assessments will be done. The CAISO is no longer proposing a "first-come, first-served" process for assessing requests for temporary shutdown outages. Instead, the CAISO will conduct a reliability assessment between T-60 and T-8 days prior to the effective date of the temporary shutdown outage, wherein the CAISO will assess all pending requests for that effective date and perform a final reliability assessment at T-8.

7. **Compensation**: Stakeholders have different views on this topic. Resource owners want at least the CPM soft offer cap price (or higher price if FERC approves it) and LSEs request other prices, including cost of service pricing and compensation for savings the resource could have realized by taking a temporary shutdown. Resource owners want a whole unit compensation approach, and a balance of period approach wherein the resource could be compensated for the entire period of the requested outage even if the CAISO needs to deny the outage based on a reliability concern for only part of the requested shutdown outage period. Some LSEs want it to be mandatory that the resource must submit a bid into the CPM CSP auction to be eligible to be paid if a request is denied, but this would then make acceptance of a TSRO CPM mandatory, while resource owners believe that acceptance of the TSRO CPM should be voluntary. LSEs request that the CAISO develop a mechanism to provide RA credits to LSEs that can be used in their RA showings where a resource has been paid a CPM payment for denial of its request for a temporary shutdown. Stakeholders request that the CAISO describe in detail how cost allocation would work for different TSRO scenarios where the CAISO denies a TSRO request. SCE requests that the CAISO make shutdown mandatory if the CAISO approves a request for shutdown.

   CAISO Response – The CAISO proposes that for a resource to be eligible to receive compensation for a denied request for temporary shutdown, it must have first provided bids, in advance, for all of the months of the month-ahead CPM CSP for all of the months for which it is requesting a TSRO outage. The compensation will be the price the resource submitted into the Monthly CPM CSP for the month that the resource requested a temporary shutdown outage, which could be below, at, or above the CPM soft-offer cap price, depending on the resource's CPM CSP offer price. The payment amount will be the whole unit MW of capacity of the resource for the period of the requested temporary shutdown outage. The resource will be required to accept a CPM designation if the CAISO denies a TSRO outage request, i.e. acceptance of a CPM TSRO designation will be mandatory. The proposal provides a method for LSEs to receive RA credits for CPM procurement for a denied request for temporary shutdown through coordination with the applicable LRA. The proposal describes how cost allocation will work when the CAISO denies a request for temporary shutdown. The proposal requires that if the CAISO approves a temporary shutdown request, the resource must then take the TSRO outage for the full period requested.

8. **Process and Timeline**: Stakeholders have several requests on this topic. The CPUC requests that the CAISO define in its timeline how long a resource has to accept or decline a TSRO designation. NRG notes that the CAISO wants a request submitted 60 days in advance, but will tell the resource its decision only eight days from the requested effective date, which NRG views as unfair. SCE and SDG&E believe the CAISO should use a window approach and not a first-come, first-serve approach as in their view a first-come, first serve approach will not lead to the most efficient outcomes. SDG&E believes the CAISO should report the results of all requests for shutdown and not just the requests that were denied and received a CPM payment.

   CAISO Response – The CAISO provides further details on the process and timeline in this draft final proposal. The CAISO changed the proposal and it is no longer voluntary to accept a CPM TRSO designation. The resource will be required to accept a CPM designation if the CAISO denies a TSRO outage request. The CAISO continues to support that a resource applying for a temporary shutdown must submit its request for a temporary shutdown a minimum of 60 days in advance of the requested effective date of the shutdown, and the CAISO must notify the resource of the CAISO's approval or denial of the requested temporary shutdown no less than eight days prior to the requested effective date of the shutdown. This timing is necessary to allow the CAISO time to perform its reliability assessment and consider multiple requests for shutdown outage during its assessment. As discussed above, the CAISO is no longer proposing to use a first-come first serve approach for assessing requests for temporary shutdown. Approved temporary shutdown outages will be included in the CAISO daily outage report as is currently done for planned and forced outages, with the same information reported as is currently done for those two other types of outages. The CAISO will issue a market notice and a designation report for any CPM TSRO procurement as a result of a denial of a request for temporary shutdown, with the reporting done the same way that it is currently done for other forms of CPM procurement.

9. **<u>Return to Service Requirements</u>**: Resource owners do not support the CAISO's 10-day return to service proposal. The CPUC requests that the CAISO define what an emergency is. PG&E requests that CAISO make public the methodology it will use to determine if a resource has to come back from shutdown for an emergency and the consequences that the resource will face if it does not come back in 10 days. SDG&E supports the CAISO's proposal that a resource should not be allowed to come back after its TSRO at a capability less than what it was when it went out on TSRO, but NRG strongly disagrees with this aspect of the CAISO's proposal and believes a resource can come back at any level of capability subject to testing.

   <u>CAISO Response</u> – The CAISO is no longer proposing to have a requirement that a resource must be prepared to return to service if needed under an emergency recall provision. If the CAISO determines that reliability concerns warrant asking the resource if it is willing to return to service early from an approved temporary shutdown, the CAISO will offer the resource a CPM payment plus an adder for costs incurred to bring the resource back online early. Additionally, the CAISO is no longer proposing that a resource must return to service when its temporary shutdown is over at the same MW rating and ramping capability as it had before it went out on temporary shutdown. However, resources on shutdown will be subject to the current tariff requirements that a resource must immediately inform the CAISO of any change in the capability of the resource such that if the capability has decreased while on temporary shutdown the CAISO knows the accurate capability of the resource before the resource becomes available again. If a resource were to decrease its capability while on temporary shutdown, the resource would need to undergo testing upon its return to service to validate the new operating characteristics and update any ancillary services certifications.

10. **<u>Minimum and Maximum Time Limits for Shutdown</u>**: Stakeholders are divided on this topic. Some LSEs support the CAISO revised straw proposal of two months minimum and four months maximum. Resource owners want a longer minimum and maximum than the CAISO has proposed (a minimum as long as one calendar year). SDG&E wants a longer minimum period (six to nine months), but that is because SDG&E views TSRO as the first step towards retirement.

    <u>CAISO Response</u> – The CAISO is now proposing that a request for temporary shutdown can be for no longer than one month at a time in the peak demand months of May through October and no longer than four months at a time in the non-peak demand months of November through April. The minimum length of time for a request to temporarily shut down is one month. A resource can submit multiple subsequent requests for temporary shutdown and the CAISO will process those requests. The CAISO is proposing allowing temporary shutdown outages of one month at a time in the peak demand months of May through October due to the highly variable nature of operations in the peak demand months and the volatility of factors such as the load forecast. The CAISO is proposing allowing shutdown outages of up to four months at a

time in the non-peak demand months of November through April because operating conditions, while variable, are less likely to impact reliability.

11. **Timing of Board Approval**: Stakeholders did not comment on the CAISO's statement that it may go to the September Board meeting for a decision rather than the November Board meeting depending on the comments submitted by stakeholders on the straw proposal.

    CAISO Response – The CAISO is now planning to go to the November 1-2, 2017 Board of Governors meeting to seek approval of its proposal.

5. Changes from Straw Proposal

The CAISO has made the changes described below from the straw proposal to create this draft final proposal.

1. Clarified that there will be no requirement that the resource owner show that the resource is in economic distress or that it is uneconomical for the owner to operate the resource.
2. Clarified that it is intended that if a resource owner requests a temporary shutdown it is for the entire unit and its entire capability.
3. Clarified that temporary shutdown outages will be available only to resources that are not a RA resource, RMR resource, or CPM resource procured through another form of CPM procurement.
4. Clarified that a resource that is "partial RA," is not eligible to request a shutdown for that month.
5. Added a provision that when submitting a request for a shutdown, a resource owner must attest that the resource is not RA, RMR or a CPM resource for the month it is requesting a shutdown, and if the resource should become a RA, RMR or CPM resource during any period of a denied shutdown it will immediately notify the CAISO.
6. Clarified the requirement that a resource must be operating as part of the CAISO's BAA to be eligible to apply for a shutdown by adding that dynamically scheduled and pseudo-tie resources are not considered within the CAISO BAA.
7. Modified the duration of a request for temporary shutdown. The CAISO now proposes that a request can be for no longer than one month at a time in the peak demand months of May through October and no longer than four months at a time in the non-peak demand months of November through April. The minimum length of time for a request to temporarily shut down is one month.
8. Clarified that a resource owner will not be limited in how many times it can request a temporary shutdown outage and there will be no limit on non-consecutive outages.
9. Added a provision where if a resource is on shutdown for a continuous one-year period and does not want to go back into service after that one-year period, the resource will

not be allowed to be approved for an additional month of shutdown. At that time the resource owner can choose to enter into the retirement process if it wants to extend the period of time it is not available to the grid.

10. Added a new provision that provides that a request for shut down can be submitted no more than 90 days prior to the requested effective date of the shutdown.
11. Revised the description of how the CAISO will perform its reliability assessment of requests for shutdown.
12. Added a provision that if the reliability assessment determines that the resource can go out on shutdown without reliability impacts, the CAISO will grant the request and the resource must then go out on shutdown for the full period requested.
13. Added a provision that describes how approved shutdowns will be included in the CAISO daily outage report and the information to be included.
14. Added a provision that to receive a payment for a denied shutdown request, a resource must have submitted to the CAISO at the time it submits it request for a shutdown, bids for use in the Monthly CPM CSP, in advance, for all of the months for which it is requesting a shutdown.
15. Added a provision where the payment price for a denied request for shutdown will be the price the resource has submitted into the Monthly CPM CSP for the specific month for which a shutdown is requested.
16. Added a provision that the payment amount for a denied request will be the whole unit MW of capacity of the resource for the period of the requested shutdown and treatment of resources with multiple units under a single resource ID.
17. Added a provision where if the CAISO denies a request for any month within the shutdown period requested the CAISO will provide a CPM payment for the whole unit for all of the months requested.
18. Clarified the CPM payment that will be paid when the reason for denying a requested shutdown is for system reasons and non-system reasons.
19. Added a provision that a resource will be required to accept a CPM designation if the CAISO denies a shutdown request.
20. Clarified how the CAISO will report CPM procurement resulting from a denied TSRO outage.
21. Clarified how cost allocation will be done for CPM procurement resulting from a denied TSRO outage.
22. Clarified how the CAISO, in coordination with the applicable LRA, will provide a mechanism for LSEs to receive credit for the procured CPM TSRO capacity towards their RA requirements.

23. Clarified what the CAISO will do if the CAISO determines that reliability concerns warrant asking a resource if it is willing to return to service early from an approved shutdown.
24. Clarified that resources on shutdown will be subject to the current tariff requirements and must immediately inform the CAISO of any change in the capability of the resource.
25. Clarified that resources should not use shutdown to dismantle or repower a facility and instead should use other established processes.
26. Added a section that describes a change to the retirement process where the CAISO proposes to add a scenario 4 in which a resource that wants to potentially retire and has not determined its next steps may request a scenario 4 potential retirement treatment.

6. Draft Final Proposal for Temporary Shutdowns

The CAISO is proposing to allow a resource owner to temporarily shut down operation of its resource for non-physical reasons, including economic reasons, provided that there is no reliability impact as determined by a CAISO reliability assessment. There will be no requirement that the resource owner show that the resource is in economic distress or that it is uneconomical for the owner to operate the resource. The resource owner can request a temporary shutdown for any reason, at its discretion.

It is intended that if a resource owner requests a temporary shutdown it is for the entire unit and its entire capability, i.e. the whole unit.[2]

Temporary shutdown outages will be available only to resources that are not a RA resource, RMR resource, or CPM resource procured through another form of CPM procurement (such as Exceptional Dispatch). For purposes of the temporary shutdown provisions, a RA resource is a resource that is either shown as RA capacity in a RA showing, or capacity that has been procured under a RA contract for that period but may not yet be shown on a RA showing, i.e., capacity that is being paid a capacity payment to be RA capacity. A resource that is “partial RA,” i.e., has part of its overall capacity contracted for RA in that month, is not eligible to request a temporary shutdown for that month. In other words, if a resource has even one-half of one MW contracted for RA, the resource is considered a RA resource and is ineligible to request a temporary shutdown for that month. When submitting a request for a temporary shutdown, a resource owner must attest that the resource is not RA, RMR or a CPM resource for the month it is requesting a temporary shutdown, and if the resource should become a RA, RMR or CPM resource during any period of a denied shutdown it will immediately notify the CAISO. A resource also must be operating as part of the CAISO’s BAA to be eligible to apply for a temporary shutdown, which excludes dynamically scheduled and pseudo-tie resources.

[2] For resources with multiple units under a single resource ID, for example, a combined cycle unit, the CAISO will provide a CPM TSRO payment for a denied request for a temporary shutdown for only the units associated with a configuration that is needed to support reliably operation.

A resource that is on temporary 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 temporary shutdown outage.

If a resource has shut down operations in the CAISO BAA and is now operating in an adjacent BAA, the resource will not be eligible to be used as an internal RA resource in a RA showing for the period that it has temporarily shut down operations in the CAISO's BAA.

The resource owner will need to formally request a temporary shutdown from the CAISO using the CAISO outage management system.

A resource owner can request a temporary shutdown at any time during the year.

A request for temporary shutdown can be for no longer than one month at a time in the peak demand months of May through October and no longer than four months at a time in the non-peak demand months of November through April. The minimum length of time for a request to temporarily shut down is one month. A resource can submit multiple subsequent requests for temporary shutdown and the CAISO will process those requests. As an example, if a resource requests a four-month shutdown outage starting in the month of March, the CAISO will grant only a two-month shutdown outage and the resource will need to then apply for one-month at a time shutdown outages for the months of May and June.

A 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) outages. There also will be no limit on non-consecutive outages. However, if a resource is on temporary shutdown for a continuous one-year period and does not want to go back into service after that one-year period, the resource will not be allowed to be approved for an additional period of temporary shutdown. At that time the resource owner can choose to enter into the retirement process if it wants to extend the period of time it is not available to the grid. The resource owner can then choose which retirement process scenario best meets its needs. The retirement process provides an option where a resource can be out of service for up to several years and can return to service if it desires (see section 7 of this draft final proposal).

The resource applying for a period of temporary shutdown must submit its request for a temporary shutdown a minimum of 60 days in advance of the requested effective date of the shutdown. A request for shut down can be submitted no more than 90 days prior to the requested effective date of the shutdown.

The CAISO will conduct a reliability assessment as described below between T-60 and T-8 days prior to the requested effective date of the temporary shutdown outage. The CAISO will assess all pending requests for that effective date and perform a capacity check at T-8. Note that this process is not a first-come, first serve process. A resource can have overlapping temporary shutdown outage requests, but a resource cannot have overlapping actual outage duration dates.

The CAISO will assess requests for temporary shutdown and allow for the maximum amount of TSRO approvals consistent with the efficient use and reliable operation of the CAISO controlled grid. TSRO requests will not be considered in conjunction with maintenance outages, as doing so would impede the CAISO's ability to allow for regular maintenance outages consistent with good utility practice.

The CAISO will notify the resource of the CAISO's approval or denial of the requested temporary shutdown no less than eight days prior to the requested effective date of the shutdown.

The CAISO will perform a reliability assessment on any application for temporary shutdown. The reliability assessment will ensure that a shutdown request does not create an expected reliability condition for which no other mitigation is available.

The ISO will perform a reliability assessment in the Operations Planning Time Horizon and in accordance with Peak Reliability Coordinator ("PEAK RC") System Operating Limit ("SOL") methodology and outage coordination process[3]. In conducting the analysis, a 1-in-2[4] load forecast as well as 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 this initial condition, with criteria for approval being expected system performance as defined in the PEAK RC SOL Methodology[5]. In applying this performance threshold to the TSRO process, the analysis will be conducted to determine if the requested shutdown outage will decrease system security by constraining the CAISO's ability to mitigate a potential reliability issue through a feasible market solution.

The CAISO will also check to ensure that the requested temporary 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.

If the reliability assessment determines that the resource can go out on temporary shutdown without reliability impacts to the grid, the CAISO will grant the request. The resource must then go out on shutdown for the full period requested. The resource cannot withdraw its request or change its mind after the CAISO has completed its study and made its determination. This requirement is proposed to mitigate potential abuse of temporary shutdown outages by resource owners that are merely seeking to secure CPM compensation to supplement energy market revenues from the period of time in which they never intended to suspend operations.

Approved temporary shutdowns will be recorded in the CAISO outage management system. Approved temporary shutdown outages will be included in the CAISO daily outage report as is currently done for planned and forced outages, with the same information reported as for those other two types of outages.

[3] https://www.peakrc.com/whatwedo/IRO017/Documents/Forms/AllItems.aspx.
[4] Add citation for IPER forecast
[5] This references single line, transformer, and generator contingency, as well a Transmission Operator defined credible multiple-line contingencies.

If the reliability assessment determines that the resource cannot go out on temporary shutdown without reliability impacts to the grid, the CAISO will deny the request and pay the resource a CPM payment to keep the resource in service.

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

The payment price for a denied request for temporary shutdown will be the price the resource has submitted into the Monthly CPM CSP for the specific month for which a temporary shutdown is requested.

The payment amount for a denied request will be the whole unit MW of capacity of the resource and for the period of the requested temporary shutdown outage. For resources with multiple units under a single resource ID, for example, a combined cycle unit, the CAISO will provide a CPM payment for a denied request for only the units associated with a configuration that is needed to support reliably operation.

If the resource requests a temporary shutdown outage consistent with the tariff requirements, and the CAISO denies the request for any month within the shutdown period requested, the CAISO will provide a CPM payment for the whole unit for all of the months requested. The maximum CPM payment will be for four months at a time.

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

The resource will be required to accept a CPM designation if the CAISO denies a TSRO outage request, i.e. acceptance of a CPM TSRO designation will be mandatory.

The CAISO will issue a market notice and a designation report for any CPM procurement resulting from a denied TSRO outage. The reporting will be the same as is currently done for other forms of CPM procurement.

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

Consistent with current practice under section 43A.9 for other types of CPM designations, if a CPM TSRO designation is longer than a month, then the CAISO will provide a mechanism for LSEs to receive credit for the procured CPM capacity towards their RA requirements in proportion to how the costs of the designation are allocated. Consistent with current tariff section 43A.9(f), the CAISO will coordinate with the applicable LRA in determining RA crediting. As an example of RA crediting, if the CAISO issues a 100 MW TSRO CPM designation for two months and one LSE will pay for 35 percent of the cost of the designation, then that LSE, subject to its LRA's decision, will be credited for 35 MW of RA capacity (i.e., 35 percent of the quantity designated) during those two months. If a TSRO outage request is denied for system reasons, then that LSE, subject to its LRA's decision, will be credited towards system RA. If a TSRO outage 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.

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

The following items are not requirements of the draft final proposal. These items are discussed here so that stakeholders understand the full proposal.

1. During temporary shutdown, the resource will not be at risk of having to respond to an Exceptional Dispatch by the CAISO, and the resource cannot be called out of a shutdown by the CAISO if "no touch' operating conditions are experienced on the grid.
2. There will be no requirement that a resource must return to service when its temporary shutdown is over at the same MW rating and ramping capability as it had before it went out on temporary shutdown. However, resources on shutdown will be subject to the current tariff requirements that a resource must immediately inform the CAISO of any change in the capability of the resource such that if the capability has decreased while on temporary shutdown the CAISO knows the accurate capability of the resource before the resource becomes available. If a resource were to decrease its capability while on temporary shutdown, the resource would need to undergo testing upon its return to service to validate the new operating characteristics and update any ancillary services certifications that are in place.

3. Resources should not use temporary shutdown to dismantle or repower a facility. Resources should use other established processes such as retirement or repowering for such purpose.

Table 2 describes how a resource on temporary shutdown is treated in the CAISO's systems and contracts.

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Table 2
Treatment of Temporary Shutdown Outages in CAISO Systems and Contracts

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.

7. Draft Final Proposal for Retirement Process

Section 11 of the Business Practice Manual (“BPM”) for Generator Management includes various scenarios for the retirement of Generating Units. With this draft final proposal, the CAISO will add scenario 4 whereby a Generating Unit that wants to potentially retire and has not determined its next steps – permanent retirement, repowering, entering the generator interconnection queue, or re-starting the Generating Unit - may request a Scenario 4 potential retirement treatment; however, the Generating Unit must remain off-line for at least one year.

For Participating Generators under Scenario 4, the amount of Deliverability that will be retained will be determined by the CAISO at the time the potential retirement notice is submitted to CAISO, Regulatory Contracts. The amount of Deliverability being retained will be evaluated based on the MW amount listed in the Participating Generator Agreement or Net-Scheduled Participating Generator Agreement, the interconnection capacity listed in the Generator Interconnection Agreement with the CAISO or interconnection agreements with the Participating Transmission Owner or Non-Participating Transmission Owner if connected to non-CAISO Controlled Grid, the Master File PMax amount, and the Deliverability amount assumed in the latest CAISO Deliverability Assessment base case. Once determined, the amount of Deliverability being retained for the Generating Unit will be communicated to the Participating Generator in writing and this amount will be retained for the Participating Generator, in the appropriate Deliverability studies.

Participating Generators that are proceeding under Scenario 4 are potentially retiring and maintaining a Generating Unit but are undecided on next steps. The Participating Generator under Scenario 4 can potentially retire and retain Deliverability for no longer than the next two generator interconnection Queue Cluster application windows following the receipt of potential retirement request. Since no study assumptions are changed, the CAISO is not aware that any study should be necessary for return to service. If the generating characteristics change in some way, the Interconnection Customer would need to request approval for that change through the post-commercial operation date modification process in their existing Generator Interconnection Agreement or switch to a repowering-retirement scenario. Prior to the expiration of this timeline, the first site repower application or Interconnection Request must be received, or a certified Scheduling Coordinator retained and meters re-inspected.

The differences in the various retirement scenarios are shown in Table 3.

Table 3 - Comparison of Retirement and Potential Retirement Options

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 Scheduling Coordinator	Remove Unit from Meter Service Agreement
Retirement #1 – approved for repowering or in queue (retain deliverability)	Max of 3 years.	At least 60 days prior to effective date for retirement	Planning	No	No	No	No	No	Yes	Yes	Yes
Retirement #2 – has not committed to repowering or entered queue (may want to retain deliverability)	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
Retirement #3 (shutting down and does not need deliverability)	NA	At least 90 days prior to effective date due to potential termination of agreements	Planning	No	No	No	No	No	Yes If only unit on PGA then PGA is terminate d	Yes	Yes If only unit on MSA then MSA is terminated
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

8. Next Steps

The CAISO will discuss this draft final proposal with stakeholders during a stakeholder call on September 13, 2017. Stakeholders are encouraged to submit written comments by October 3, 2017 to initiativecomments@caiso.com.

Appendix 1

Stakeholder Written Comments on Straw Proposal

This section of the draft final proposal provides the entire written stakeholder comments that were submitted to the CAISO on the June 21, 2017 straw proposal. The CAISO has provided responses to these written comments in the body of this draft final proposal in section 4.

List of Acronyms:

Calpine	Calpine Corporation
CPUC	Energy Division, California Public Utilities Commission
DC Energy	DC Energy
DMM	Department of Market Monitoring
NRG	NRG Energy, Inc.
PG&E	Pacific Gas & Electric
SCE	Southern California Edison
SDG&E	San Diego Gas & Electric Company
Six Cities	Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California

1. Who is eligible?

Calpine - Any resource should be able to submit a request for a temporary shutdown during a period in which it is not contracted as RA, CPM or RMR. A unit under a current, but expiring contract should not be prohibited from seeking a future shutdown.

CPUC - Energy Division staff recommends that CAISO clarify whether partial units are eligible to temporarily shut-down operations and explain how this would be consistent with the rationale that costs to operate plants are largely fixed. In its draft paper, CAISO states, "The CAISO agrees that treatment of partial-resources should be part of the scope." However, it is often argued that the costs of operating a plant are largely fixed – thus, how would allowing one portion of the plant to shut down save the money for a generator on its fixed costs?

NRG - NRG has no comments on this aspect of the proposal.

PG&E - In its Straw proposal, CAISO proposes to limit the TSRO provision to non-RA and non-RMR capacity. It further defines that RA capacity as capacity that is either "shown" as RA capacity in a RA showing, or capacity that has been procured under a RA contract but may not be shown on a RA showing. PG&E supports the proposed eligibility criteria. In addition, PG&E proposes that any capacity that has received a CPM designation should be precluded from seeking a TSRO designation, as said capacity is essentially treated as RA capacity over the designated period.

SCE - SCE agrees that only Non-RA and Non-RMR resources should be eligible for temporary shutdown. SCE agrees with stakeholder comments during the conference call that RA contracts may be for specific months and not encompass the entire year. Therefore, a resource that is requesting temporary shutdown should be eligible if in the months of shutdown, it has not sold RA capacity. In order to properly evaluate whether a resource is under contract to an LSE, the CAISO should require the resource to attest that it does not have an agreement and should it enter into one during any period of denied shutdown will notify the CAISO. In this latter case, the CAISO would then cease any payments to the resource. Finally, after the term of the shutdown or denied shutdown has expired, the CAISO should perform an audit to ensure that the resource was not under contract. This audit could include public release of the identity of the resource such that LSEs can review to determine if a contract did indeed exist. If it is determined during this audit that the resource did have an RA contract, any payments due to a denial of shutdown should be collected from the generator by the CAISO.

SDG&E - As SDG&E indicated in our 7/11/17 comments on "Capacity Procurement Mechanism Risk-of-Retirement ("CPM ROR") Process Enhancements." TSRO may not be needed. With the expectation of decreasing future loads, it unlikely a long TSRO will be able to bridge to a more economic period for the generator. Also, short TSRO could be used to create scarcity and raise prices for other generators and this should be avoided. However some possible CPM ROR development outcomes could make TSRO needed. SDG&E agrees that resources, whether RA or not, should be eligible to request TSRO for some time in the future as a step prior to retirement. However, the acceptance or denial information should ensure the bilateral capacity market will not be impacted. This parallels CAISO's proposal in CPM ROR for the results of the April window. SDG&E believes more discussion should take place around partial resource TSRO. A MSG unit may be able to lower its fixed and variable costs by shutting down one or more units while operating the remaining unit(s). SDG&E is uncertain and not opposed to the partial TSRO but more discussion needs to take place surrounding the likelihood or economics of such an event. SDG&E believes that since the request for TSRO and the resulting denial creates a CPM designation which would be charged to ratepayers; the CAISO should require the resource to have offered into the CPM CSP. The decision for TSRO request should not be made lightly and therefore the CPM acceptance should also not be voluntary. In the existing Tariff, if the resource did not offer into the CPM CSP, then the resource may reject any CPM designation. However, if the resource offered into the CPM CSP, then such a designation is no longer voluntary. SDG&E strongly believes the CAISO should require offering into the CPM CSP a prerequisite.

Six Cities -. A resource should not be eligible to request permission to implement a temporary shutdown for any period during which it is subject to: (i) an RA contract (except where the RA contract expressly contemplates and allows temporary shutdowns and the requested shutdown period does not include any month for which the resource already has been included in an RA showing), (ii) any form of CPM designation, or (iii) a Reliability Must Run ("RMR") designation. However, a resource that currently is subject to an RA contract, a CPM designation, or an RMR designation should be able to submit a request for permission to implement a temporary shutdown for a future period for which it does not have RA, CPM, or RMR obligations.

2. Whether the CAISO may allow a Participating Generator to temporarily shut down operation of its Generating Unit for economic reasons.

Calpine - Yes. The CAISO should allow uneconomic units to shut down, as long as doing so does not create reliability concerns. An uneconomic outage should relieve the generator of any requirement to respond to Dispatch Orders and leave the operational status to the discretion of the asset owner. That is, the owner may decide to redeploy staff and make operational and/or physical modifications that "preserve and protect" the resource for future operation. Alternatively, the owner might choose to maintain the unit in a state of readiness – allowing the resource to quickly cancel the outage and return to service. The point here is that while on shutdown, operational discretion rests with the resource owner, and not with CAISO.

CPUC - Energy Division staff requests that CAISO clarify what it means to shut down for "economic reasons" and whether there is any burden on the generator to demonstrate that it is uneconomic to operate. In other words, how would the CAISO evaluate the difference between a resource that is truly uneconomic and one that is engaging in sanctioned withholding?

DMM – Participating Generator Agreements ("PGAs") require generators to comply with the ISO Tariff. The Tariff requires generators to get the ISO's approval when taking an Outage. As FERC stated in its order denying the La Paloma complaint, "[…] based on the most reasonable construction of the tariff, the only permissible reasons for seeking an outage from CAISO include planned maintenance, new construction, or other work." Therefore, because none of the reasons listed are non-physical, the ISO Tariff does not permit non-physical Outages. The ISO Tariff also requires generators to promptly comply with Dispatch Instructions and operating orders from the ISO. By not allowing non-physical Outages combined with its requirement that generators promptly comply with orders, the ISO obligates generators to incur costs (e.g. maintaining staff, physical preparedness, et al.) if they do not have an approved physical Outage. It is inappropriate to create this obligation without compensating a generator for the costs of meeting the obligation plus a rate of return. Therefore, the ISO should develop policy to allow generators without resource adequacy (RA) obligations to take non-physical Outages and policy obligating the ISO to pay for the availability of such generators whose nonphysical Outage request the ISO has denied.

NRG - NRG supports allowing a Participating Generator to temporarily shut down its Generating Unit for economic reasons – or for any reason, for that matter – when the Generating Unit is not under a Resource Adequacy ("RA") or Reliability Must-Run ("RMR") contract. An un-contracted resource has been deemed to be not needed for any purpose, and should be allowed to shut down for a period of time without cause.

PG&E - As described previously, PG&E opposes the promulgation of a TSRO regime, primarily out of concern that its introduction skews incentives and leads to unintended consequences. For instance, under the TSRO regime a generator with flexible (maintenance) outage scheduling parameters may be incentivized to submit a TSRO request in lieu of one for a standard maintenance outage. While the generator may be indifferent between the two options if the outage is approved, requesting a TSRO has the added benefit of potential financial compensation if the request is denied, or if the resource is brought online as a result of the CAISO exercising its proposed 10-day return-ability option. This financial compensation is not available to resources that provide generic maintenance outages.

SCE - SCE agrees with the proposal.

SDG&E - SDG&E supports granting TSRO due to economic reasons as a first step of the retirement process. TSRO should be allowed to let resources shut down in order to have time to fully evaluate a retirement decision. TSRO should not be granted just because a resource estimates that it may be uneconomic during certain times of a year. Allowing such provides the wrong market incentives, risk grid reliability and ultimately increase ratepayer costs. The CAISO should be concerned and monitor gaming if a supplier were to request TSRO for one effective resource because it was able to contract another less effective resource to an LSE in order to receive payments for both resources. Therefore, SDG&E believes the TSRO should only be used as a step to properly evaluate a future retirement.

Six Cities - The Six Cities support the CAISO's proposal to allow a Participating Generator to temporarily shut down operation of its Generating Unit for economic reasons, provided there is no adverse reliability impact as determined by the CAISO's study.

3. The conditions under which the CAISO may grant a request for temporary shutdown.

Calpine - Simply put, a shutdown request should be granted if withdrawal of the resource does not create unacceptable reliability concerns.

CPUC - In its straw proposal, CAISO states its belief that it would rarely prevent a generator from shutting down for a short period of time. ("It is expected that such denials would be rare.") Energy Division staff recommends that CAISO consider what would happen if large amounts of non-RA resources requested permission to temporarily shut-down in the same timeframe and whether it anticipates that it would allow large amounts of resources to do so. If not, how will the CAISO determine when this threshold would be crossed?

NRG - NRG has no comments.

PG&E - PG&E has no comment at this time.

SCE - SCE agrees with the proposal. Further, SCE agrees with concerns expressed by stakeholders during the call on this topic. Some stakeholders expressed concern that a denial appears to create a reliability requirement that had not been previously considered. SCE agrees with this concern and believes that the RA program should be closely examined to determine if it is adequately defined. SCE believes that an adequately defined RA program would rarely result in a denial of a request for a temporary shutdown. SCE notes that the recent change to the counting of renewable resources (i.e. moving from exceedance to ELCC) should more appropriately count the ability of resources to meet reliability needs. The net result of ELCC is a reduction in the amount of MWs that count for RA. The result will be a showing of more non-renewable resources. As such, the CAISO should find themselves with sufficient resources to operate the grid and the denial of a temporary shutdown request should be very rare.

SDG&E - SDG&E believes the CAISO should only grant TSRO or place a resource under TSRO if the resource is headed towards retirement. If the resource is uneconomic, then the CAISO would study the resource(s) to ensure such an outage would not risk grid reliability.

Six Cities - The Six Cities support the CAISO's proposal to allow temporary shutdown of resource operations when the CAISO's study in response to a request for permission to implement a temporary shutdown indicates that the requested shutdown will not have adverse impacts on grid reliability.

4. Reliability Studies.

Calpine - Calpine believes that the ISO – or transmission owners – are in the best position to establish NERC and WECC reliability criteria and to perform requisite studies. However, the studies and the requirements should be no less stringent than the Local Capacity Requirements studies.

CPUC - Energy Division recommends that CAISO provide additional details on its reliability studies. For example, CAISO states that "in conducting the analysis, expected load forecast as well as previously approved transmission and generation outages will be considered as part of the default study assumptions and system topology." ED staff has the following questions:

- What load forecast will be used – the IERP 1-in-2 forecast? If not, please explain what forecast will be used?
- What import assumptions will be used – MIC? If not, what forecast will be used?
- Will CAISO include both planned and forced outages?

With respect to outages, ED staff requests that CAISO explain if it would ever cover planned outages (without replacement) with this mechanism and how that would not result in duplicative costs for ratepayers. Likewise, would CAISO ever cover forced outages with this mechanism and why should those not be covered with the existing CPM mechanism that allows for the selection of the least expensive resources that best cover the forced outage? In addition, CAISO states that its Local RA Analysis will "ensure the LCR procurement target will serve as baseline while an updated system topology that reflects all approved and forced transmission and generation outages to date, as well as expected load forecast will be used to validate the LCR procurement targets ability to ensure system security." ED staff requests that CAISO explain what it means by expected load forecast and how this might change the LCR procurement. For example, if the 1-in-10 is 10,000 MW, but CAISO is evaluating a winter month with a 7,000 MW load, does this mean it would consider a lower LCR requirement? If so, please explain. Finally, CAISO states that "In addition to the TSRO Reliability Analysis and the TSRO Local RA Analysis, the CAISO will also conduct a TSRC System RA check to ensure the TSRO application does not reduce available System RA capacity below the monthly System RA requirements." Energy Division staff requests clarification on how DR is taken into consideration in this system analysis.

<u>NRG</u> - NRG agrees with the approach laid out by the CAISO.

<u>PG&E</u> - The CAISO proposes to make approval of a TSRO request conditional on the results of the same type of reliability studies conducted for maintenance outages in addition to traditional CAISO studies used for capacity purposes. PG&E requests that the CAISO provide greater transparency into the methodologies and results of said studies conducted for TSRO analysis, as these types pf reliability studies have not been previously used in CPM assessments or to set RA requirements. Since the financial impact of a TSRO denial is likely to be greater than how these studies have been traditionally used, more documentation of the methodology, contingencies, and the inputs to the studies is needed to provide greater transparency into the CAISO's decision making process. For example, when the CAISO has a conflict between planned outages for physical reasons, the last outage submitted will be the first outage requested to be rescheduled. If the outage conflict cannot be resolved, the CAISO can deny the planned outages for reliability reasons. The CAISO's TSRO proposal indicates it plans to mirror the existing reliability study process; however additional clarity is needed to understand how TSRO outage requests will interact with the existing process. PG&E also asks the CAISO to describe the type of market power tests or mitigation rules that are envisioned as a part of the TSRO evaluation.

<u>SCE</u> - See comments in Section 3 above.

<u>SDG&E</u> - SDG&E requests the CAISO to provide more detail regarding the TSRO Reliability Analysis. It would be helpful to understand whether the expected load forecast is the same as the 1-in-10 and 1-in-2 load forecasts that were used in the development of LSEs' RA requirements. If different, why might it be different? Why does the CAISO not include a Flexible RA analysis and is only limited to Local and System RA analyses. It is unclear whether the TSRO reliability analysis's four month window is reasonable. The CAISO states that the reliability analysis mirrors the current generation maintenance outage analysis process. It is unclear if that analysis process stretches to or beyond the four month time horizon and whether the CAISO's study process is accurate. SDG&E hopes the CAISO can provide additional details in its proposal. SDG&E strongly recommends the CAISO to consider studying TSRO requests in a cluster rather than first come first served. The main goal for the CAISO is not only to ensure grid reliability but also an efficient market to serve load. Given two resources, one more effective or efficient than the other, the CAISO should deny TSRO of the more effective resource as it would yield lower energy market prices. This concept/logic is built into the current CAISO's Tariff authority for CPM. Under Tariff Section 43A.4.2, the CAISO must minimize the "overall costs" of meeting grid reliability. As

part of cost minimization, the CAISO considers the resource's Pmin, eligible capacity, relative effectiveness of meeting local and/or zonal constraints, and relative operating characteristics such as dispatchability, ramp rate and load-following capability. Since a denial of TSRO results in CPM, SDG&E believes the CAISO should cluster and analyze all requests in order to have the most effective and lowest over-all cost resources for grid reliability. Therefore a first come first served analysis similar to the outage approval process does not work for CPM. SDG&E requests the CAISO to discuss whether approving TSRO for resources may impact the deliverability of other generators on the grid. Would certain resources temporarily receive additional NQC due to increased deliverability to sell? Or less NQC because the topography of the system is impacted?

Six Cities - The Six Cities generally support the CAISO's approach to evaluation of potential reliability impacts of a requested shutdown as described at pages 17-18 of the Straw Proposal.

5. The form of compensation, if any, that the CAISO would provide the Participating Generator if the CAISO denies the Participating Generator's request to take the Generating Unit out of service for a temporary shutdown.

Calpine - As we have stated previously, if a resource is denied a TSRO, we support compensation at the CPM soft-cap price (or higher price if approved by FERC). In addition, compensation must be based on the whole unit, not established solely on the reliability need. That is, if a 500 MW unit seeks a shutdown, but the reliability need is only for 100 MW, the whole unit must be compensated, as the costs of the whole unit are needed to meet the incremental need. Also, since participation in the CSP bidding process is voluntary, Calpine supports the absence of any requirement to participate in CSP in order to be compensated for a denied shutdown request.

CPUC - In its proposal, CAISO indicates that it will use the CPM mechanism, but also states that "The resource will not be required to have offered into the CPM CSP to be eligible to receive a CPM payment for a denied request." Energy Division staff requests that CAISO explain why participation in the CPM CSP is not mandatory. In addition, Energy Division staff recommends that CAISO discuss not just the compensation, but also the allocation of these costs. For a system or flexible resource deficiency, ED staff assumes that the costs would be allocated across the entire CAISO service territory, whereas a local deficiency would be allocated to the applicable TAC area. CAISO should discuss and clarify the allocation of any CPM costs that arise from this new mechanism.

DMM – Paying generators without RA obligations when they are denied non-physical Outages, but not paying generators without RA obligations when they are denied traditional Outages introduces a discrepancy between how the ISO handles different Outage types. Denying either type of Outage without payment is tantamount to the ISO procuring additional capacity while at the same time obligating a resource to incur uncompensated costs. The ISO should consider extending payment to denied traditional (physical) Outages, in much the same way that is being contemplated in this initiative for non-physical Outages.

NRG - NRG agrees that the payment should be the CPM payment. If the CAISO determines that the resource is needed during the time of the requested shutdown period, the CAISO should, consistent with the proposal in the CPM Risk of Retirement stakeholder process, provide a "balance of period" designation and associated payment. As an example – assume the Participating Generator wants to take the unit out of service from October through January. If the CAISO determines that the resource is required in January, the CPM payment should begin in October. To not start the payment in October would be to assert that the resource is required to remain in operation without any reasonable certainty that it could or would recover its fixed costs until the month that it is needed. NRG also requests the

CAISO clarify that the current minimum CPM designation terms would still apply in situations in which the CAISO calls a resource on temporary shut-down back to service. For example, NRG requests that the CAISO confirm that if the CAISO called the resource back to service 20 days from the end of its shut-down period, that resource would be owed at least a 30-day, and, if called back for local reasons, a 60-day CPM designation.

PG&E - The CAISO is proposing to pay generators who are denied a TSRO request with a CPM, which will be (a) its CPM bid price, if the resource has submitted one into the CPM competitive solicitation process ("CSP"), or (b) the CPM soft offer cap price, if the resource does not bid. PG&E believes that a generator should be compensated for the savings it could have realized by taking a shutdown (i.e. the generator's opportunity cost). To this end, PG&E proposes that a generator whose TSRO request is declined should be required to file documentation demonstrating forecasted avoided costs associated with a shutdown (e.g. payroll, employee benefits, property and payroll taxes, etc.). If the length of the denied suspension period is greater than one month, LSEs should receive resource adequacy "credits" towards their obligation. The CAISO tariff contains provisions for this type of credit allocation. A process to allocate local exceptional dispatch CPMs, however, has yet to be developed even though they last 60 days. CAISO should use this initiative to correct this inconsistency. PG&E asks the CAISO to describe how other Balancing Authorities with similar temporary suspension provisions (e.g. NYSO) have dealt with the question of compensation.

SCE - SCE has the same concern with this proposal as it did for the Risk of Retirement CPM. That is, this proposal can serve as a form of price discovery. If a resource does not have an RA contract, there is little harm in applying for temporary shutdown with the potential upside of picking up a CPM payment at the price cap. If a resource can establish a pattern of need by doing this, there will be little incentive for the resource to enter into an RA agreement at a price below the CPM soft offer cap. The CAISO resolved this issue in the Risk of Retirement proposal by requiring the bid to be subject to a cost of service review by FERC. SCE believes the same process should be followed here.

SDG&E - As SDG&E noted above, resources seeking TSRO should have offered its capacity into the CPM CSP. Doing so would at least ensure the designation could not be declined due to the voluntary nature of CPM.

Six Cities - The Six Cities support the CAISO's proposal to pay compensation based on 1/12 of the resource's CPM competitive solicitation process bid price or 1/12 of the CPM soft cap charge per MW for any month during which it denies a resource's request for permission to implement a temporary shutdown based on reliability needs.

6. The CAISO may want to establish a limit on the minimum amount of time that a Generating Unit can shut down its operations, and perhaps a maximum amount of time.

Calpine - Calpine understands the need for a minimum shutdown term – if for no other reason, to overcome the transactional barrier of performing studies and evaluating reliability need. We are not yet convinced that a 4 month maximum duration is necessary or efficient. Units that would seek to operate only seasonally (e.g., July-September) would be forced to seek two outages, doubling the work of all parties. Further, it is impractical and costly to force units that take physical and personnel actions to facilitate mothballing, to expend costs to prepare the unit for such a status and then be required to seek successive 4 month terms to allow the asset to remain mothballed. The PRR for Generation Management suggests that unbounded mothballing can occur (with controversial provisions for deliverability confiscation). We do not see any need for TSRO to be limited to just 4 months.

CPUC - No comment at this time.

DMM – The ISO does not provide a policy justification for capping non-physical Outage lengths at four months. DMM's current understanding is that the ISO could approve planned maintenance Outages of greater than four months. The ISO should explain why it is appropriate to have a different policy for planned maintenance Outages of resources with RA obligations than for planned non-physical Outages of Generators without RA obligations.

NRG - The CAISO has proposed that the minimum shut-down time be two months, and the maximum shutdown time be four months. The CAISO, however, has also proposed that the resource be able to be returned to service within ten business days at the CAISO's request.1 If the resource owner has to maintain the generating unit in a state to be able to return the generating unit to service within ten days at the CAISO's request, then the effective minimum shut-down period is ten days, because that is the level of 'return-ability" that the CAISO requires and the generating unit owner must maintain. This level of return-ability – which comes at a cost for which the CAISO has offered no compensation - effectively provides the CAISO with a free option on the resource's service. If the CAISO wants to set a two-month minimum duration to dissuade Participating Generators from shutting down their units for a short period, the CAISO should either provide an option payment to maintain ten business day "return-ability" within that two-month period, or set the level of return-ability equal to the two-month minimum shut-down period. On the June 28 call, the CAISO indicated that the four-month maximum duration was selected to coincide with the seasonal study process. While the CAISO is proposing to allow a generating unit to extend the four-month shutdown period by submitting another request no sooner than 15 days prior to the end of the current shut-down period, tying the maximum study period to the seasonal study process implies that the seasonal study process can imposes reliability requirements outside of and independent from the currently-prescribed RA process. Further, NRG believes that the proposed requirement that the resource owner not be able to request an extension until no earlier than 15 days prior to the end of the shut-down period does not provide adequate time for the resource owner to request, and the CAISO to consider, such an extension request. If the need for the unit would arise from a need to maintain reliability in a local capacity area, the local capacity needs should be defined in a year in advance, and a generating unit not selected to meet these requirements (or any other RA requirements) should be allowed to shut down without cause for a calendar year.

PG&E - PG&E supports the establishment of limits (both minimum and maximum) to the time that capacity can suspend operations for economic reasons. However, assessing the optimal duration of a single TSRO period remains challenging, as the CAISO has yet to paint a clear picture of how a TSRO process aligns with other backstop procurement and established planning processes. It's still unclear, for instance, how many consecutive TSRO requests CAISO could in theory accept before it refers the resource owner to the CPM ROR process. It is also unclear what the absolute maximum (continuous) time period a resource owner has to determine what it'll do with the resource on TSRO. PG&E recommends that approved TSRO requests have a uniform time period of 4 months, with the possibility of a single extension request. PG&E also recommends that CAISO describe what recourse generation owners will have once they run out of TSRO extensions. For instance, does the generator automatically moved in to the Risk of Retirement assessment process, or fall under the new mothballing provisions (Scenario 4) being considered in the PRR for Section 11 of the BPM for Generator Management?

SCE - SCE asks that the CAISO clarify that the minimum time for shutdown is binding upon notification of approval of the shutdown from the CAISO. If a resource can withdraw its request after acceptance from the CAISO but prior to the start of the shutdown, this would create a free option for resources to attempt to obtain a CPM payment if the CAISO denies the outage with no risk of lost revenues from energy sales if they can revoke the request if it is determined that they are not needed.

SDG&E - SDG&E believes the minimum amount of time proposed by the CAISO is too generous and would allow generators to repeat TSRO requests in the same months of each year. Instead, SDG&E believes the minimum should be six to nine months as SDG&E views TSRO as a first step towards the retirement process. SDG&E requests the CAISO to provide more details as to the intersection of TSRO and the various scenarios of the generation retirement process. Does a resource requesting consecutive TSROs eventually or automatically step into one of the three options, or four as in the case of the pending PRR change, of the generator retirement process? Such details would help market participants understand the limits and possible incentives of these intersecting processes.

Six Cities -. The Six Cities support the CAISO's proposals to establish a two-month minimum period and four-month maximum period for temporary shutdowns and to allow renewals of temporary shutdowns. However, a resource that submits requests for sequential temporary shutdown periods should not be permitted to retain full deliverability status beyond one year (*i.e.*, three sequential four-month shutdown periods) unless repowering criteria and procedures are applicable and satisfied.

7. The CAISO will need to establish a specific timeline for requesting shutdown of operations allowing for appropriate operations planning time and notification of approval and denial.

Calpine **-** Calpine agrees that a definitive timeline for submitting, evaluating and notification of a shutdown request is necessary for rational business planning.

CPUC - CAISO has indicated that it would require generators to submit their requests 60 days in advance of the applicable month and notify generators "no less than eight days prior to the requested effective date of the shutdown." Energy Division staff requests that CAISO clarify how much time generators have to accept or decline a TSRO award. It would seem to be important to know if generators will actually shut down. For example, what would happen if 6 generators requested a TSRO and CAISO approved the first 5 and granted a CPM to the 6th, but the first 5 chose not to shut down or returned to service during the timeframe in question (if return to service during the shutdown period is permitted – see request for clarification of this question in our general comments above).

NRG - The CAISO's proposed process is very asymmetric – a Participating Generator needs to submit a shut-down request 60 days in advance, which the CAISO needs only provide notification as to the disposition of the request a mere eight days prior to the requested effective date.

PG&E - PG&E has no comment at this time.

SCE - SCE generally agrees with the planning timeline and notification of approval or denial. SCE does prefer that there be some form of processing window such that some form of competition can occur. If the CAISO utilizes the CPM bid (even if subject to cost verification by FERC), then utilizing a window could allow for resources to serve any need under a denial of request on an economic basis.

SDG&E- SDG&E recommends a window for requests rather than a deadline as proposed by the CAISO as SDG&E does not support the first come first served analysis process. A deadline approach provides the incorrect market signals to ensure grid reliability at lowest over-all costs. SDG&E also believes the CAISO should report and notify all requests and approvals to market participants for transparency purposes. This does not have to be reported immediately, like CPM designations, but reports would provide transparency to market participants. For the denial of TSRO, or CPM designation, SDG&E

believes the CAISO should mirror its current process for RMR, ROR or other CPM scenarios where market participants have an opportunity to comment on the designation and provide other solutions to avoid the CPM and allow the resource to temporarily shut down. If another option is available to mitigate the reliability risk at a lower price than the CPM, the CAISO should consider that option.

Six Cities - Except as addressed elsewhere in these comments, the Six Cities take no position at this time on the CAISO's proposed timeline regarding requests for temporary shutdown of operations.

8. Is there a level of "return-ability" that would need to be maintained while the Generating Unit is in shutdown status?

Calpine - As stated above, while on shutdown, the resource owner should have the discretion to make any and all operational decisions, including physical modifications to the units. While Calpine would not object to a "best-efforts" requirement to return to service in extreme, emergency conditions, a *continuous obligation* to maintain readiness to return in 10 business days – or even 30 days as proposed in the BPM PRR – defeats the cost-saving purpose and intent of a suspension of operations. In fact, all the costs of continued operations (staffing, procurement, fuel arrangements, equipment readiness preparations, etc.) would have to be maintained – contributing further to the economic distress of the resource without any compensation. Were a resource headed into a major maintenance cycle, the resource owner would be forced to consider whether it was required to perform uncompensated major maintenance – to invest capital with no reasonable expectation of recovering such investment. As we have previously suggested, the obligation to maintain readiness is an uncompensated option on the capacity of the unit.

CPUC - In its straw proposal, CAISO states that it would include a provision "where a resource could be called back into service early if there is an emergency on the grid" and would "give the resource owner 10 business days to come back into operation," with a CPM payment. Energy Division staff recommends that CAISO clarify what constitutes an "emergency." Would this include an expected heatwave, expected high loads, or an unanticipated / emergency forced outage? In general, how does CAISO expect to be able to predict an "emergency" 10 days in advance?

DMM – A requirement to return to service within 10-days may be too short a time for a generator with a non-physical Outage to realize the benefits of having the Outage. Based on stakeholder comments it appears likely the cost saving measures could not be realized with a 10-day return to service requirement. Generators would still have to incur fixed costs such as staffing and maintaining equipment readiness. The ISO proposes the emergency return time requirement for reliability purposes. However, capacity that the ISO thinks it needs to be available within 10 days seems like a capacity product that should be compensated. An alternative option to consider is allowing the generator to specify an emergency recall time in its non-physical Outage application. The ISO would still have clarity for planning purposes and generators would be free to specify a return to service time frame that would ensure they benefit from taking the Outage. The 10-day return to service requirement may eliminate benefits a generator would receive from being permitted to take a non-physical Outage. If the ISO keeps the 10-day return to service requirement, a generator's incentive for requesting a non-physical Outage may be limited to the potential capacity compensation for any Outage requests that the ISO denies.

NRG - Please see the response to question 6.

PG&E - In the Straw Proposal CAISO retains the right to call a resource back into service early if there is an emergency on the grid. In that case, the resource owner will have 10 business days to come back into operation and the CAISO will then owe the resource a CPM payment as the resource is now needed for reliability. PG&E does not oppose this, but urges the CAISO to document and make public the methodology it will use to determine (a) if TSRO resources need to come back from suspension inside a 10 business day period, and (b) which units (when more than one is under suspension) to bring back from suspension, should system conditions require this action. PG&E also urges CAISO to make clear if there are any conditions under which a resource can voluntarily come back from suspension before the TSRO period concludes, as well as the consequences of being unable to return within the 10 business day period.

SCE - SCE supports this provision of the proposal.

SDG&E - SDG&E agrees that a resource should not be allowed to change its generator characteristics upon return from TSRO.

Six Cities - The Six Cities take no position at this time on the CAISO's proposal to require a resource granted permission to implement a temporary shutdown to maintain ability to resume operation within ten business days.

9. If a Participating Generator has temporarily shut down operations of its Generating Unit, would it be eligible to be used as a RA resource in a RA showing for that period?

Calpine - Not generally. However, a unit currently on a shutdown can submit an RA showing (e.g., 45 days in advance) for a future period under which the shutdown no longer applies – either through its normal expiration of through a cancellation by the resource owner / SC.

CPUC - Energy Division staff agrees that a resource that is shut down should not be able to qualify as RA.

NRG - No.

PG&E - Under some circumstances PG&E believes that LSEs should be permitted to use TSRO capacity in an RA showings, particularly if their stack of substitution resources is impacted by unforeseen events (e.g. forced outages), and the resource in question has the capacity to be fully operational over the period of the RA showing.

SCE - SCE supports this provision of the proposal.

SDG&E - No, at no time should the TSRO period overlap with the RA period. SDG&E believes that the resource should be allowed to contract RA capacity after the TSRO approval. Some scenarios are provided as follows. In scenario 1, if a resource submits and receives approval for TSRO for future months, it should have all capabilities to continue to contract with LSEs for its capacity. Under the CAISO proposal, the resource may request a 4 month outage for July through October. Such a request must be submitted by May 1st. The resource should not be prohibited from selling RA for the TSRO months since the month-ahead supply plans have not yet been submitted. Once the supply plans are submitted, the resource must cancel its TSRO outage by the supply plan due date or the CAISO will cancel the outage for the resource because it is RA. In scenario 2, the resource may have already contracted its capacity for a time period which overlaps with the TSRO. In such a case, the TSRO should be denied as the resource is already RA. However due to the timing of supply plans the CAISO might not have such knowledge of the RA contract. Therefore, at the time of the supply plan submission, the resource or the CAISO should cancel the TSRO. The CAISO may consider whether it would move the start date of the TSRO so that it does not overlap with the RA period but the end date should not be adjusted. In such a scenario, the CAISO may not have to restudy the outage as it was originally approved. In scenario 3, if a resource has a single contract covering Q1 and Q4 and requests TSRO during Q2 and Q3, the CAISO should reject the outage. SDG&E does not support this situation as the resource knowingly has future

RA commitments and is not preparing for retirement. The CAISO should prevent and monitor this type of scenario from occurring.

Six Cities - The Six Cities agree with the CAISO's conclusion that a resource should not be eligible to be included in an RA showing for any period during which it has implemented a temporary shutdown. However, the Cities recommend that the CAISO clarify that a resource may terminate a temporary shutdown early and return to operation in order to provide RA capacity.

10. If a Generating Unit has shut down operations in one BAA and is now operating in an adjacent BAA, would it be eligible to be counted as a RA resource in the BAA for which it has shut down its operations?

Calpine - No.

CPUC - We have no comment at this time.

NRG –No.

PG&E - PG&E agrees with proposal to limit RA eligibility to capacity operating in the CAISO BAA.

SCE - SCE supports this provision of the proposal.

SDG&E - SDG&E requests the CAISO to expand on the timing and process for this question. It is unclear to SDG&E how easy or difficult it is for a resource to operate or transition into the adjacent BAA.

Six Cities - If a resource has shut down operations in the CAISO BAA but is operating in an adjacent BAA, it should be eligible to provide RA capacity in the CAISO BAA only if it is not committed as RA capacity in the adjacent BAA and only if it qualifies under the CAISO requirements applicable to imported RA resources.

11. Other Comments

Calpine - Thanks for the productive modifications proposed in this Issue Paper. This proposal overlaps and may supersede similar efforts to modify the Generation Management BPM to allow a "mothballing" of resources and related consequences to deliverability. As we described in (late) comments in that PRR proceeding, we believe that changes in operational requirements for resources should be – as they are here – included in revisions to the tariff, and not merely processed through revisions to the BPMs. In addition, the conditions for deliverability retention, allocation and transfer are pending in FERC NOPR RM17-8-000. We ask that the CAISO include an acknowledgement of this NOPR in the next draft of the TSRO. Finally, Calpine conditions its support of this proposal on maintaining the voluntary nature of the TSRO designation and that the tariff and its related contracts continue to allow each resource the unilateral right to terminate the relevant PGA or remove units from the attached PGA Schedule 1

CPUC – In the straw proposal, CAISO states that in addition to changing the tariff to "make it permissible for this new type of temporary shutdown outage to be reported through the CAISO's outage management system," that it also intends to "reinforce its current tariff language regarding the general need for outages reported through the outage management to be for physical reasons." Energy Division staff request that CAISO provide its proposal for reinforcing its current tariff language. Also, in its straw proposal, CAISO states that, "The CEC has no policy on electric generation operation standards or the action of mothballing or permanently retiring a generator, although the CEC refers to the CPUC for maintenance standards and CPUC General Order 167". However, in Calpine's letter to the CAISO regarding some of its peakers, it stated that it would submit a closure plan to the CEC and that "Approval of this closure plan is required to satisfy its CEC licensing requirements prior to the commencement of decommissioning activities." Therefore, Energy Division staff recommends that CAISO update this section to reflect the CEC closure plan requirements, to the extent applicable. Proposed Tariff Language: Energy Division staff recommends that CAISO include in its revised straw proposal its proposed tariff amendments and include these proposed tariff amendments with the proposal brought to the Board. In the past, CAISO and stakeholders have spent considerable time discussing the tariff changes and whether these are consistent with the Board approved proposal and the entire process would be more efficient and transparent if the proposal and the proposed tariff amendments were developed in tandem, rather than sequentially. Additional Details Required: As discussed further below, Energy Division staff believes many additional details need to be specified. For example,

- If a shutdown request is granted, is a generator obligated to shut down?
- If so, must a generator shut down for the entire duration of the request?
- If not, and a generator returns to operation, can they shut down again during the designated timeframe?
- How will the costs be allocated (e.g., will there be different allocations for system, flexible and local needs and will these needs be defined in this manner)?
- Do other jurisdictions allow temporary shutdowns – why or why not?
- Does a generator need to prove that it is uneconomic to operate—why or why not?

DMM – Approved non-physical Outages should not bind a generator to remain offline for the duration of its Outage. If a generator on non-physical Outage wants to come back online it would be inefficient to keep it from doing so and competing in the market. However, there should be incentives in place to prevent generators from abusing the non-physical Outage process. In particular, incentives should be designed to discourage generators from requesting Outages that they intend to cancel if the ISO approves the Outage, because they are attempting to benefit from the capacity compensation they would receive for a potentially denied Outage request. Possible incentives to consider to prevent such behavior include:

- Not allowing a resource to submit requests covering the same dates as another active, withdrawn or approved non-physical Outage request;
- Require a resource that cancels an approved non-physical Outage to have a must offer obligation for the remainder of the originally approved Outage;
- If a resource cancels an approved non-physical Outage that resource should not be awarded an Exceptional Dispatch CPM if it is exceptionally dispatched during the remainder of the period for which its non-physical Outage would have been in effect; and
- Other incentives the ISO or stakeholders may develop during this policy initiative.

One way to facilitate enforcement of non-physical Outage requirements for generators without RA obligations is to publicly make clear which generators have applied for Outages. A public posting of applications and approvals will give LSEs the ability to evaluate whether non-physical Outage applicants are in conflict with their RA obligations. Taking this step will help to mitigate the risk of generators with RA obligations applying for Outages that could result in the generator getting compensated twice for its capacity.

DC Energy- On the June 28 stakeholder call we inquired whether the requests to shut down and subsequent determinations would be noticed to the market. We were informed the requests would be processed through the Outage Management System; however, it was not clear if they would be made transparent to the market. DC Energy submits that in order to uphold market transparency the following elements of the straw proposal should be noticed to the market within five business days of the submitted request or determination:

(i) Requests for temporary shutdown or requests to renew a temporary shutdown

(ii) CAISO's determination (i.e. rejection or approval) of said request

(iii) CAISO initiated recalls of a resource that is currently in a temporary shutdown

(iv) Early return to service from a currently scheduled temporary shutdown

Providing market notices for these items within five business days is the current practice for the comparable processes in the Electric Reliability Council of Texas (ERCOT). The notices contain the resources name, the requested action or determination, and the associated start and end dates. This practice has functioned well in the ERCOT market for numerous years and would close any information asymmetry in the straw proposal. In addition, it would provide valuable information to transmission planners seeking to understand resource availability and its impact on system needs. We appreciate the CAISO's consideration of our comments.

NRG - Maintaining the unit's operating characteristics during the shutdown period. NRG disagrees that the Participating Generator should be required to return the generating unit to service after the shutdown with the same operating characteristics that the generating unit had prior to the shutdown. On the June 28 call, the CAISO indicated that this was to "freeze" the unit's PGA during the shutdown, and to keep the unit maintained during the shutdown period. However, NRG is neither persuaded as to why the CAISO needs to "freeze" the PGA during the shutdown, nor persuaded as to why the generating unit needs to be returned to service with the same operating characteristics it had prior to the shutdown. To NRG's thinking a shutdown would be an ideal time to change the resource's operating characteristics, should the resource owner wish to do so. NRG acknowledges that the resource would have to undergo testing upon its return to service to validate the new operating characteristics and update any ancillary services capability certifications in place. Nevertheless, the CAISO's insistence that the unit return to service in exactly the same state it was in prior to the shutdown amounts to yet another free option acquired by the CAISO. Again, the fundamental premise behind allowing a resource to shut down is that the resource has been determined to not be needed for reliability. The owner of a resource deemed not to be needed owes no obligation to any party to provide a certain level of service. The only obligation the resource owner owes to the CAISO is to accurately represent to the CAISO the unit's operating characteristics. This does not mean that the owner cannot change the characteristics at any time; it just means that the owner has an obligation to demonstrate those characteristics to the CAISO upon the unit's return to service.

PG&E - While in concept PG&E understands the merits of permitting generators to seek authority to temporarily suspend operations for economic reasons, we do not support the TSRO Straw Proposal as we do not think the risks its implementation creates outweigh the potential benefits. Our primary concern is that the CAISO has not framed the issue of temporary suspension in the context of a larger discussion of the overall capacity retirement/retention process of determining generation needed for reliability that is procured at the least cost. PG&E continues to believe that the key issue facing the CAISO is the Risk of Retirement. At best the TSRO would provide a stop gap measure with limited benefits, and at worst could create perverse incentives or unintended changes to the RA incentives. Without analyzing the interplay between the TSRO and a number of related processes - including the CPM ROR and RMR designation processes, annual/monthly RA compliance requirements, and the outage management process – the CAISO risks implementing an initiative that skews generator incentives and leads to significant unintended consequences, including expanding gaming opportunities, which could lead to higher RA procurement costs, or result in a net increase in CPM awards. The TSRO/CPM ROR/RMR interplay cannot be fully appreciated until the CAISO provides an outline of the purpose of each designation, inconsistencies between them, potential overlaps, and side by side comparisons of the costs/benefits each designation provides the market. PG&E urges the CAISO to provide these details in its second Straw Proposal. Implementation of the TSRO could also add unnecessary complexity to the existing RA procurement, outage management, and related processes. In addition, PG&E believes that the Straw Proposal has limited applicability and thus will have minimal impact on addressing the long-term retention of sufficient generation capacity to maintain reliability. Our concern is that the implementation of a TSRO regime only delays the development of a more comprehensive and longer-term solution while creating additional risks to customers. PG&E also objects to the fact that the proposal does not ensure that Scheduling Coordinators (SCs) will receive credit towards their RA obligations if a TSRO request is denied by the CAISO, which in turn could result in RA over-procurement by SCs.

SCE – None.

SDG&E - SDG&E strongly encourages the CAISO to consider the benefits of using TSRO as an entry into the CPM ROR process in a holistic process. Allowing TSRO to function as a standard business practice sends dangerous market signals.

Six Cities - The Six Cities have no additional comments on the Straw Proposal at this time.