

Reliability Services Initiative – Phase 2 Second Revised Draft Final Proposal

Comments by Department of Market Monitoring
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Summary

The Department of Market Monitoring (DMM) appreciates this opportunity to comment on the Reliability Services – Phase 2: Second Revised Draft Final Proposal. This iteration of the Reliability Services proposal would make the following four revisions to the ISO's Resource Adequacy (RA) processes:

- allow resources located in local capacity areas but shown as system RA to be substituted with a system RA resource located outside of the local capacity area;
- allow scheduling coordinators to update effective flexible capacity during the year;
- improve RA showing tracking and communication; and
- exempt load serving entities with one MW or less of forecasted RA requirement in any transmission access charge area forgo submission of a monthly RA showing without penalty.

This iteration of the proposal has deferred several improvements to RA processes:

- substitution for flexible capacity resources on planned outage and
- application of the RA availability incentive mechanism to combined flexible capacity resources.

We support the ISO's effort to clarify and add flexibility to RA processes, but urge the ISO to take additional action as soon as possible on both the portions of this initiative that have been deferred as well as additional scope designed to address weaknesses in the design of the RA availability incentive mechanism (RAAIM). DMM supports the ISO's commitment to address weaknesses in existing RA procurement and enforcement in phase 3 of this initiative.

Specifically, DMM urges the ISO to address the following improvements in Reliability Services Initiative – Phase 3:

1. Incorporate an assessment of performance when resources are dispatched into the availability incentive mechanism,
2. Clarify treatment of planned outages for non-maintenance reasons,
3. Set flexible capacity requirements adequate to meet actual operational needs,
4. Link flexible capacity procurement to a must-offer obligation for operational ramping products, and
5. Address items postponed from Reliability Services Initiative Phase 2.

In the following comments, DMM first discusses problems we see with the ISO's RA processes that are not being addressed in the current initiative. We then provide comments on specific aspects of the Second Revised Draft Final Proposal.

Resource Adequacy Availability Incentive Mechanism performance incentives

The ISO's final draft proposal included necessary improvements to the RAAIM, but these measures have been postponed. However, even with implementation of the postponed measures, we continue to view the design of the RAAIM as incomplete. In future initiatives, we recommend the ISO incorporate into its availability incentive mechanism an assessment of resources' actual performance when dispatched, rather than rely solely on whether or not a resource submitted a bid.

Resource Adequacy plays a critical role in the ISO's markets. It is intended to ensure that sufficient capacity with the requisite flexibility characteristics to maintain system and local reliability is made available to the ISO. The ISO -- in consultation with local regulatory authorities -- specifies the criteria for resource characteristics and locations that will ensure system reliability. However, if RA resources do not perform according to the characteristics that the ISO and local regulatory authorities assume the resources will provide, the RA process may not ensure system or local reliability. Therefore, the RAAIM should penalize resources that cannot consistently perform at the standards the ISO assumes for the resources in the ISO's reliability studies and when setting requirements for the quantity of capacity load serving entities are required to procure.

Penalizing RA resources that do not perform according to the standards required of them should increase the efficiency of the RA process by increasing incentives to perform and/or by resulting in RA contracts going to the resources that have the performance characteristics required for reliability. This would be more efficient than RA contracts being awarded to resources that bid into the ISO according to their Must Offer Obligations, but which ultimately perform poorly when dispatched. This would also be more equitable for owners of resources which perform up to standards compared to those which do not.

If a resource's revenues from RA contracts is tied to whether the resource is offered and performs in the ISO markets, this economic incentive may be pivotal in the resource's decision to offer energy to the ISO's markets. The RA revenues may even be a crucial determinant of whether or not a resource remains operational at all. Therefore, incorporating into the RAAIM an assessment of resources' performance when dispatched may have an important impact on the operational characteristics of resources available to the ISO in future years.

Accurately specifying the blend of unit characteristics and locations necessary to maintain reliability, and contracting resources that can actually perform according to the assumed specifications, will become increasingly important with the growing penetration of intermittent renewable resources in ISO markets.

Planned outages for non-maintenance reasons

The current resource adequacy replacement rules are intended to ensure adequate capacity is available while considering the fact that units that must take planned maintenance outages throughout the year. The replacement rule is based on a *last-in-first-out* approach. In other words, resources that are first to submit planned outages are the last to be required to replace this capacity if needed. This provides an incentive for RA resources to notify the ISO of planned maintenance outages as early as possible. However, this policy does not adequately address the possibility that RA resources may take planned outages for non-maintenance reasons.

While the replacement process ensures that these outages will not result in a shortage of total RA capacity, it also provides an incentive for resources to be compensated as RA capacity (or be counted to meet the requirement of an LSE) and then be declared on planned outage in order to take advantage of the probability that an outage reported early in the process will not require substitution.

For example, a pseudo-tie unit that planned on selling its power to a different balancing authority area could submit a planned outage far in advance of the time it plans on selling its power to the other balancing authority area. The resource would then be low in the replacement stack at the time of the RA plan review and would therefore be relatively unlikely to be required to find replacement. The unit could then double-sell its capacity to an outside entity without incurring a penalty in the ISO for not being available. Instead, a different resource that may actually need to take an outage for maintenance would have to be replaced by an LSE or provide substitute capacity itself.

DMM believes the intent of the replacement rule is to accommodate maintenance outages -- not outages that are economic in nature. Consequently, we suggest the ISO and stakeholders consider modifications to the current process to prevent this from occurring. One option would be to require replacement for all RA units that take an outage for non-maintenance purposes regardless of the timing of the outage submission or total capacity shown for the month.

Flexible capacity requirements should be adequate to meet actual operational ramping needs

The current resource adequacy replacement rules are intended to ensure adequate The ISO is developing a 5-minute flexible ramping product and new capacity model constraints that will result in resources being scheduled and compensated to help ensure sufficient additional capacity is available to respond to contingencies within 30 minutes. Any flexible capacity requirements established for the resource adequacy process should be designed to ensure that day-to-day market requirements for these resource flexibility needs can be consistently met by the flexible capacity procured. However, flexible resource adequacy requirements are not based directly on these day-to-day operational requirements and do not account for many operational resource and system constraints. Therefore, flexible resource adequacy requirements and counting

criteria require annual re-evaluation and adjustment to ensure capacity procured meets operational needs.

Flexible resource adequacy criteria and must-offer obligation

DMM has also recommended that the ISO tariff should include must-offer provisions ensuring that flexible capacity procured to meet forward requirements are actually made available in the ISO markets to meet operational and market needs.

The ISO continues to assess and improve the newly implemented flexible resource adequacy program as part of the flexible resource adequacy criteria and must-offer obligation initiative. While this program is in its first stages, DMM encourages the ISO and CPUC to consider modifying the current framework. Analysis summarized in our annual report suggests that the 2015 requirements and must-offer hours were insufficient in reflecting actual ramping needs.¹ This was not necessarily an issue in 2015 because the load-serving entities procured significantly more flexible capacity than required. However, if load-serving entities had only procured the minimum Category 1 and maximum Category 2 and 3 requirements, this capacity may have fallen short of the actual flexibility needed to meet ramping needs under some conditions.

The effectiveness of flexible resource adequacy requirements and must-offer rules hinge in part on the ability to predict the level of the maximum net load ramp as well as the time of day the ramp occurs over a year in advance. DMM recommends that the ISO and local regulatory authorities consider broadening the must-offer obligations in order to accommodate the uncertainty underlying annual assessments.

DMM is also concerned that a significant amount of procured flexible capacity in 2015 was from long-start or extra-long-start units that will not have a real-time obligation unless committed well in advance. This is because non-resource adequacy resources, which may be scheduled in the day-ahead market instead of the long-start resource adequacy resources, do not have a must-offer obligation in real time. These resources may self-schedule in real time or be of lower quality (for example, hourly-block resources), which will ultimately provide less flexibility to the market. DMM encourages the ISO and CPUC to consider whether flexible capacity from such resources should be limited in order to ensure the grid has sufficient real-time flexibility.

Substitution for flexible capacity resources on planned outage

The ISO must strike a balance between substitution rules that are too restrictive and costly and those that are too loose and which could therefore compromise the benefits of the flexible resource adequacy program. Flexible capacity category requirements are set based on the ISO's assessment of flexible ramping needs. The rules and processes surrounding the implementation of the flexible resource adequacy program must not compromise these requirements because they could, in turn, compromise system

¹ 2015 Annual Report on Market Issues & Performance, Department of Market Monitoring, May 2016, pp. 220-222. <http://www.caiso.com/Documents/2015AnnualReportonMarketIssuesandPerformance.pdf>

reliability needs. If the ISO allows lower quality resources to substitute for higher quality flexible resource adequacy capacity then there must be strict guidelines in place to preserve the level of flexibility ultimately provided to the system (and assumed, by ISO operations, to be available).

The ISO has postponed a proposal to require a substitute resource to demonstrate that it has the capability to meet the must-offer obligation of the category it is replacing at the time of the outage request. The ISO states that it will use the same confirmation process that is used for forced outage substitutions, although this process is not well defined in the proposal. The ISO should elaborate on how the confirmation process will be implemented and how the ISO will verify the demonstration when approving the outage.

DMM is concerned that if this process is not adequately thorough, the proposed substitution framework could undermine the flexible resource adequacy category requirements and the program as a whole. The RAAIM alone is not sufficient to encourage resources to substitute equivalent flexible capacity. For example, the RAAIM does not assess whether or not a substitute for a category 1 resource has two starts per day in a given month. Therefore, the ISO must verify that the substitute resource has at least two starts per day before approving the outage of the category 1 resource.

Address the RAAIM exemption currently in place for combined flexible capacity resources

On balance, DMM supports the ISO's postponed proposal to remove the RAAIM exemption for combination flexible resource adequacy resources as this was an obvious shortcoming of the initial policy. We support the ISO's quasi-resource framework because it will evaluate both the shared flexible resource adequacy obligation and the cumulative generic obligations of both resources. The quasi-resource framework will assess both of the resources' resource adequacy obligations jointly, as if they were a single resource. As DMM understands the proposal, the flexible resource adequacy availability assessment will use whichever resource had the highest availability for the day. The incremental generic capacity availability assessment will use the sum of incremental capacity available from both resources.

However, because the two resources will be assessed as a single resource, we note that an issue could arise if one of the combination resources is shown in a local capacity area and the other is able to meet the flexible and generic resource adequacy obligations on its own. In this case, the resource in the local area could take a forced outage, not provide local substitution and not be subject to RAAIM penalties. DMM is concerned that this could be an opportunity for an entity to count local capacity but not actually provide it. While this is a potential drawback in the proposal, DMM still views the quasi-resource framework as an improvement over current rules.

Separate local and system RA for purpose of forced outage substitution

The ISO currently has differing substitution requirements for resources in a local area and those outside of a local area. Resources in local areas have to provide substitution for resources located in the same area while those outside of a local area can be replaced with any system resource. The ISO is proposing to instead create requirements which differ based on whether or not the capacity is 'designated' as serving local needs.

DMM supports the ISO's proposal to allow resources located in local areas to sell a system RA capacity product with system RA substitution requirements. Doing so allows resources located in local areas to participate in two markets, local and system RA, rather than being forced to sell a single bundled product. Under the ISO's proposal, sellers of system capacity in local areas would no longer seek to recover the expected cost of replacement with local resources in system RA prices.

PG&E has submitted comments raising a concern that the ISO's proposal would exacerbate market power dynamics in the bilateral RA market in local areas by allowing suppliers to sell all or a portion of their capacity as system RA with system RA substitution requirements.² DMM concurs with the position -- noted by several other stakeholders-- that the ISO's proposal does not alter the supply of capacity available to be offered in bilateral RA market in local areas. The proposed change does offer suppliers an alternative market, system RA, in which to sell their capacity. The bilateral RA capacity market for both system and local RA is overseen by the California Public Utilities Commission. The CPUC maintains jurisdiction over prices paid for capacity in both markets.

In addition, the ISO's tariff includes provisions allowing the ISO to procure any resources needed if capacity procured by load-serving entities under the resource adequacy program is not sufficient to meet system-wide and local capacity requirements. These provisions include both reliability must-run contracts and the capacity procurement mechanism (CPM). The replacement CPM, currently scheduled for implementation on November 1, 2016, allows resources to submit bids for capacity, but these bids are capped by a soft offer cap. This cap -- which had been accepted by the parties involved as just and reasonable -- serves as an additional tool to mitigate the exercise of market power within the capacity procurement mechanism market operated by the ISO.³

DMM agrees with other stakeholders that the ISO's proposal is incomplete without extending the distinction between a local resource procured for system RA from one procured for local RA to the ISO's assessment of annual and monthly RA plan sufficiency. A load serving entity unable to procure sufficient RA capacity in a local area would not be flagged as deficient by the ISO if its plan includes sufficient local area resources, whether or not those resources were procured for system or local RA. The ISO would

² *Comments of Pacific Gas and Electric Company: Reliability Services Phase 2 Draft Final Proposal*, March 2, 2016. http://www.caiso.com/Documents/PG_EComments-ReliabilityServicesPhase2-DraftFinalProposal.pdf

³ Further detail on the CPM replacement to be implemented 11/1/2016 is available here: http://www.caiso.com/Documents/May26_2015_TariffAmendment_CapacityProcurementMechanism_Revisions_ER15-1783.pdf

not procure replacement capacity through a CPM until a local area resource, necessary to meet the local requirement but shown as system, submitted an outage and substituted with system capacity outside the local area. At such time, the market power mitigation measures built into the CPM would apply. We support the extension of this distinction to forward planning assessments in phase 3 of this initiative.

Process to update EFC list during the year

The ISO proposes to update a resource's EFC mid-year upon request (rather than automatically updating the unit's EFC if characteristics change). When calculating a resource's EFC, the ISO uses the use-plan of the previous year. So if a resource anticipates its use-plan changing, it must submit documentation during the comment period of the draft EFC list so that the change is reflected in the following year's EFC. Since the EFC is only calculated once a year currently, DMM believes this additional flexibility is beneficial. However, a resource that changes its resource characteristics in such a way that it no longer qualifies for its current Flex RA category should be disqualified.