



California ISO

Resource Adequacy Availability Incentive Mechanism (RAAIM) Exemption Option

For Variable-Output Demand Response Valued
Under an Effective Load Carrying Capability
(ELCC) or Similar Methodology

July 6, 2021

Market & Infrastructure Policy

Stakeholder Process

The CAISO is proposing a capacity valuation option for variable-output Demand Response Resources¹, providing Demand Response Services² as Proxy Demand (PDR) or Reliability Demand Response Resources (RDRR),³ to be exempt from the Resource Adequacy Availability Incentive Mechanism (RAAIM). The option will be available to those PDR or RDRR resources whose Qualified Capacity (QC) is established using an Effective Load Carrying Capability (ELCC) counting or similar methodology that assesses the capacity value on these principles:

1. Assesses DR's contribution to reliability across the year or seasons as a variable-output resource
 - Should evaluate how DR contributes to system reliability as a variable resource beyond the monthly peak day during peak hours, especially given the growing need for “energy sufficiency” as fuel-backed resources retire from the grid.
2. Assesses DR's interactive effects with other similarly-situated resources
 - Use- and availability-limited resources, like DR, can saturate when adding similarly-situated resources to the grid; incremental amounts of the same resource type adds less and less additional reliability value to the system.

The CAISO is publishing this paper as a “final proposal” in a new accelerated stakeholder initiative process, having determined that this new optionality will require tariff clarifications needing CAISO Board and FERC approval prior to

¹ CAISO tariff defined term defined as, A resource, including but not limited to a Proxy Demand Resource, providing Demand Response Services. Participating Load is not a Demand Response Resource within the meaning of this definition.

²CAISO tariff defined term defined as, Demand from a Proxy Demand Resource or Reliability Demand Response Resource that can be bid into the Day-Ahead Market and Real-Time Market and dispatched at the direction of the CAISO.

³ Demand Response, referenced throughout the paper, is the term used to denote Proxy Demand Resources (PDR) and Reliability Demand Response Resources (RDRR). Specifically, the proposals capacity valuation option with RAAIM exemption is for PDR and RDRR demand response participation.

annual resource adequacy showings due in October of 2021 for the 2022 resource adequacy compliance year.

This final proposal is a result of work significantly vetted in the CAISO's Energy Storage and Distributed Energy Resources Phase 4 (ESDER 4) initiative stakeholder process, which included consideration of "vetting qualification and operational processes for variable-output demand response resources."⁴ This topic was included in the ESDER 4 initiative to explore a new and more appropriate qualifying capacity valuation method applicable to the variable-output nature of demand response resources. The initiative included a study performed by Energy and Environmental Economics, Inc. (E3) that proposed an analytical framework that could be used for evaluating the resource adequacy value of demand response using an effective load carrying capability (ELCC). The study results were initially presented and discussed on May 27, 2020 during a CAISO stakeholder call. Stakeholders had the opportunity to review the study results and provide feedback. In December 2020, E3 publicly released an update of the study based stakeholders' review of the initial study and the inclusion of additional data submitted by stakeholders that was not included in the initial study.⁵

The ESDER 4 final proposal paper reiterated the intent of the results of the study were to be used as a means to inform stakeholders, including Local Regulatory Authorities (LRA), on how supply side demand response should be valued taking into consideration its variable and energy-limited nature. Study results were entered into the CPUC's RA Program Track 3B.1 proceeding in support of the CAISO's Proposal 2 to the Commission to adopt an ELCC methodology to calculate qualifying capacity values for variable-output demand response resources beginning in the 2022 resource adequacy year.⁶

⁴ ESDER 4 Stakeholder Initiative Webpage:

<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Energy-storage-and-distributed-energy-resources#phase4>

⁵ Final E3 DR ELCC study: <http://www.caiso.com/InitiativeDocuments/E3DemandResponseELCCStudy-EnergyStorage-DistributedEnergyResourcesPhase4.pdf>

⁶ CAISO Resource Adequacy Track 3B.1 Proposals January 28, 2021
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M362/K887/362887738.PDF>

In its Track 3B.1 proposal to the CPUC, the CAISO requested that:⁷

The Commission should apply an ELCC methodology to supply-side demand response to modify its qualifying capacity value in ways relevant and meaningful to the needs of the transforming grid. The Commission should leverage the CAISO's work to consider how Energy Division staff can further vet and apply an ELCC methodology to supply-side demand response. The E3 ELCC Study demonstrates it is possible and appropriate to use an ELCC methodology to assess the value of demand response. Importantly, adopting an ELCC methodology for demand response consistent with the CAISO's aforementioned principles would enable the CAISO to justify and seek FERC approval of tariff revisions to treat demand response as a variable energy resource, similar to wind and solar resources. This would exempt demand response from RAIM and eliminate the obligation for demand response to bid a fixed capacity amount.

An ELCC methodology more accurately reflects the capacity value for demand response resources than the LIP. In addition, the resulting ELCC values will allow the CAISO to adopt necessary tariff revisions to incorporate demand response resources into existing market processes more effectively.

The proposed decision in the Commission's RA proceeding recognizes DR as a variable resource and proposes that the qualifying capacity methodology be re-evaluated for RA year 2023 and beyond.⁸ The recent ruling from Commission President Batjer allows the CAISO and IOUs to file a refreshed ELCC study for use as the qualifying capacity methodology for RA year 2022, subject to Commission review and approval.⁹ These anticipated changes enable the CAISO to seek tariff revisions to treat demand response as a variable output resource before FERC.

This stakeholder process, considered an extension of the ELCC valuation proposals examined in the prior CAISO ESDER 4 stakeholder process, will include a window for feedback on the tariff changes being proposed and not

⁷ CAISO Resource Adequacy Track 3B.1 Proposals January 28, 2021 Proposal 2, page 22
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M362/K887/362887738.PDF>

⁸ Proposed Decision of Administrative Law Judge Debbie Chiv, Rulemaking 19-11-009, May 21, 2021.

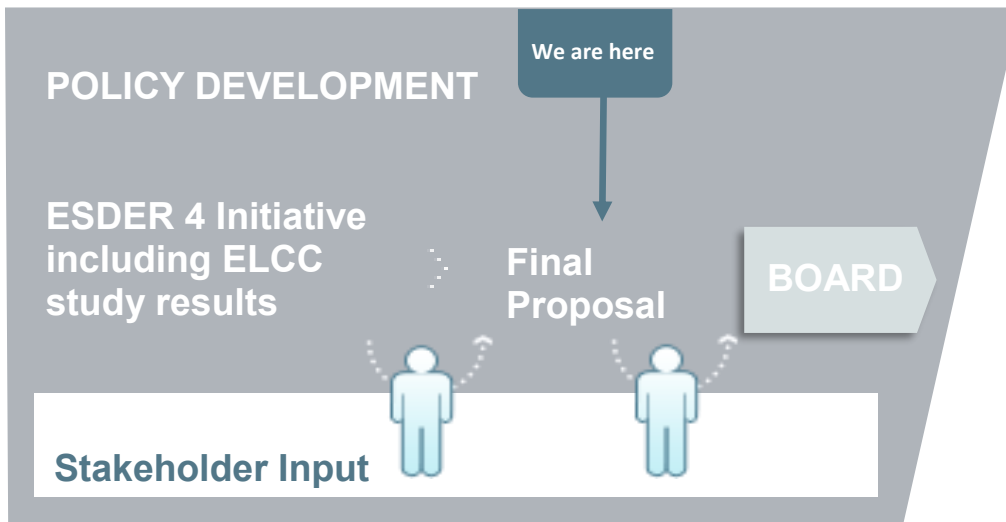
⁹ Assigned Commissioner's Ruling on Submission of Refreshed Effective Load Carrying Capability Study Results, Rulemaking 19-11-009, June 3, 2021.

previously discussed. These changes will be made necessary for the CAISO to obtain authority to exempt DR resources from RAAIM as a final policy proposal to operationalize variable-output demand response resources valued under an ELCC or similar methodology.

Figure

Figure-1 below shows the status of the publication of this paper within the accelerated stakeholder engagement process for policy development.

Figure 1: Final Policy Proposal – RAAIM exemption for variable-output demand response valued under an ELCC Methodology



Process for Approval – Decisional Classification

For this initiative, the CAISO plans to seek approval of the proposed tariff changes from the CAISO Board only. We believe this initiative falls outside the scope of the EIM Governing Body’s advisory role because the initiative does not propose changes to either real-time market rules or rules that govern all CAISO markets. Rather, this initiative proposes changes to the tariff that would affect resources only in the CAISO balancing authority area. Specifically, the initiative would provide an option for variable-output demand response resources to be exempt from RAAIM. This would apply only to demand response resources providing resource adequacy to load serving entities (LSEs) serving load in

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CAISO's Balancing Area Authority (BAA) as a supply side resource procured to serve that load. It would not apply to LSEs outside CAISO's BAA. The CAISO welcomes stakeholder comments on this proposed decisional classification for the initiative.

Introduction – Variable-output demand response resource valuation

The CAISO defines variable-output demand response resources as those demand response resources whose maximum output can vary over the course of a day, month, or season due to production schedules, duty cycles, availability, seasonality, temperature, occupancy, etc. For instance, certain demand response resources' output may vary with weather, like an AC cycling demand response program that can reduce more load on a hot day when air-conditioner use is high versus on a moderate day when air conditioner use is low. When a variable-output demand response resource provides resource adequacy capacity in the year-ahead or month-ahead timeframe, depending on conditions, the resource may be unable to deliver its full stated resource adequacy capacity in the day-ahead or real-time given its variable nature.

Many demand response resources also have energy limitations that affect a resource's ability to provide the energy associated with the resource adequacy capacity they provide. These limitations include hours of operability, duration, or number of event calls. As California transitions to a decarbonized grid, the CAISO will likely rely more heavily on both variable and energy limited resources. As such, it is critical to assess the ability of the new resource fleet, including preferred resources, to displace carbon-emitting generation while maintaining system reliability and serving energy needs every hour of the year.

The central tenet of the resource adequacy program is to ensure sufficient energy is available and deliverable when and where needed. If a resource cannot bid its full shown qualifying capacity and deliver it under its must offer obligation, it jeopardizes the central tenet of the resource adequacy program. Additionally, resources incapable of meeting their shown net qualifying capacity value during the availability assessment hours will be assessed charges through the Resource Adequacy Availability Incentive Mechanism (RAAIM).

A majority of demand response resources have dependencies that result in having a variable output (curtailment capability) even though they are treated under CPUC current resource adequacy rules as capable of delivering their claimed qualifying capacity value whenever dispatched. This potentially

overstates their resource adequacy qualifying capacity value and jeopardizes the CPUC's resource adequacy program and CAISO reliability.

To address this issue, the CAISO, the CPUC, and LRAs must modify demand response resource adequacy and market participation rules to align with the following principles:

1. The qualifying capacity valuation methodology for demand response resources must consider variable-output demand response resources' reliability contribution to system resource adequacy needs across the year;
2. Assess how DR's reliability contribution saturates as other similarly situated use- and availability-limited resources are added to the system; and
3. Market participation and must offer obligations must align with demand response resource capabilities.

Increasing penetrations of variable resources, including certain types of demand response, make it important to quantify the contribution of these resources and their ability to serve system load when they are needed. For wind and solar resources, this assessment is done by determining the resources' Effective Load Carrying Capability (ELCC). Once an appropriate qualifying capacity value is determined for wind and solar by applying the ELCC, the resource can fulfill its must offer obligation by bidding the amount it is physically capable of providing per its forecast.

In the ESDER 4 final proposal paper¹⁰, the CAISO demonstrated how a similar methodology could be applied to variable-output demand response and those with energy limitations, and allow them to be exempted from RAAIM.¹¹

Resource Adequacy Availability Incentive Mechanism (RAAIM) Exemption Option Proposal

¹⁰ ESDER 4 final proposal paper, section 6.2 <http://www.aiso.com/InitiativeDocuments/FinalProposal-EnergyStorage-DistributedEnergyResourcesPhase4.pdf>

¹¹ It may not be necessary to apply an ELCC value or provide alternative market participation options for demand response resources that are neither variable nor energy limited if they can provide a fixed load reduction value over the course of the RA month.

The CAISO initiated this expedited stakeholder process to formally exempt demand response resources from RAAIM that use an ELCC or similar methodology that accounts for the contribution to reliability and saturation effects of variable-output demand response resources. This option will allow for variable-output demand response resources shown on supply plans to meet their RA tariff and must offer obligations by bidding their forecasted “true” availability into the DA and RT markets which may vary from their established QC value shown on the supply plan. The ELCC methodology takes into account the variable nature of DR resources and their use and availability limitations. As a result the DR resources QC is adjusted to account for its variability, use and availability limitations and they are, therefore, not expected to always be bid at their shown RA QC value. However, their bids should reflect the actual capabilities of the resource in those market timeframes, whether above or below the shown RA QC value. As pointed out in the ESDER 4 final proposal, in the event the ELCC or similar methodology used in the QC valuation of the RAAIM exempted variable-output demand response does not result in bidding their resources’ full capability based on current conditions, the CAISO could consider additional means to incentivize availability in other initiatives such as Resource Adequacy Enhancements, or exercise its unannounced testing authority to assess bidding practices.

Demand response resources that continue using the existing counting methodology for determining the QC value of their demand response programs (*i.e.*, traditional load impact protocol evaluation) will not be eligible for the proposed option and will continue to be subject to RAAIM given the load impact protocol does not meet the principles stated previously, that DR’s contribution to reliability be assessed across the hours of the year as a variable-output resource, and be evaluated alongside other similarly-situated use- and availability-limited resources. The CAISO recognizes that it may not be necessary to apply an ELCC value or provide alternative market participation options for demand response resources that are not variable or energy limited if they can provide a fixed load reduction value over the course of the RA month. The ELCC methodology with RAAIM exemption proposed here is not exclusive or a replacement, but an additional methodology that can be employed as an alternative to the CPUC’s existing load impact protocol.

This proposal provides a pathway for resolving concerns by the CAISO in initiating PRR1280 and expressed by stakeholders in comments submitted in its opposition, by having DR resources, counting as RA capacity, to be shown on RA plans and Supply plans. As discussed above, this follows the tariff requirement applicable to every resource that provides RA Capacity. The

CAISO's FERC-approved tariff only allows the CAISO to count resources to meet RA obligations if they are shown on a RA Plan and Supply Plan.

This proposal has been developed with the CAISO's understanding that a RA DR resource may need an incentive to be available for market dispatch, recognizing the DR resources have a marginal cost for dispatch (cost of lost production) unlike other RAAIM exempt resources such as variable energy resources like wind and solar. RAAIM was designed to help ensure that RA resources, specifically relevant for DR, do not sell capacity obligations that they are unable to meet and unable to bid.

The CAISO believes it is appropriate to only exempt DR RA resources from RAAIM if their QC is established using an ELCC, or similar, counting methodology that considers DR's contribution to reliability and saturation effects. Those DR resources evaluated under other methods should be able to provide the capacity they have shown to meet an LSE's RA requirements and should be able to perform to their RA showing amount whenever dispatched. In the alternative, DR resources that are not confident they can perform and bid to their QC amount, can sell a quantity less than the QC amount to avoid the risk of RAAIM penalties.

An ELCC or similar methodology takes into account the variable and availability-limited nature of DR, resulting in a QC value that is adjusted to account for this variability. Therefore, such DR resources are not expected to bid their designated QC RA value all hours the resource is available, but only what the resource's load curtailment capability is in that hour. Thus, it would not be appropriate to apply RAAIM to such resources evaluated under an ELCC methodology as this would be a form of a double penalty on the variable nature of the resource. This proposal will also clarify the must offer obligation for these DR resources to allow them to bid in their expected energy availability (see Appendix A for more discussion on the changes in the Must Offer Obligation).

This proposal takes a similar approach for DR that was used for variable hydro resources with storage. IOUs were concerned that certain hydro resources ability to perform up to their QC values was dependent on hydro conditions and therefore requested that they be exempt from RAAIM. To resolve this, hydro resources that use a counting methodology that accounted for hydro conditions were exempted from RAAIM, but were given the option to retain the use of a PMax QC valuation and be subject to RAAIM. The same construct is being employed here to provide the proposed optionality for variable-output DR resources to be exempt from RAAIM or choose to remain under a non-ELCC QC valuation methodology and be subject to RAAIM.

Background

See Appendix A for relevant background information.

Proposed Tariff Changes

To implement the RAAIM exemption, the CAISO proposes to amend section 40.9.2(b)(1) of its tariff and add a sub-section (D) to include proxy demand resources and reliability demand response resources, in the list of resource types that are exempt from RAAIM when providing local and system RA capacity so long as these demand response resources have their QC set through ELCC or a substantially similar methodology. The proposed amendments to section 40.9.2 are noted below in red underline:

40.9.2 Exemptions

- (a) *Capacity Exempt from RAAIM – All Provisions. The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 –*
 - (1) *Resources with a PMax less than 1.0 MW;*
 - (2) *Non-specified resources that provide Resource Adequacy Capacity under contracts for Energy delivered within the CAISO Balancing Authority Area;*
 - (3) *Participating Load that is also Pumping Load; and*
 - (4) *Legacy RMR Units.*
- (b) *Capacity Exempt from RAAIM – Local/System*
 - (1) *The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity –*
 - (A) *Variable Energy Resources;*
 - (B) *Combined Heat and Power Resources; and*
 - (C) *Run-of-River Resources; and*
 - (D) Demand Response Resources whose Qualifying Capacity is established using an effective load

carrying capability methodology (as that term is used in Section 399.26(d) of the California Public Utilities Code, or a successor provision) that the CAISO determines, in conjunction with the relevant Local Regulatory Authority, adequately assesses both: (i) the contribution Demand Response Resources, as variable-output resources, make towards maintaining reliability across all periods of the year; and (ii) the diminishing incremental reliability benefits provided to the CAISO grid from adding more resources with use and availability limitations similar to those faced by existing resources. Demand Response Resources whose Qualifying Capacity is established using an effective load carrying capability methodology (as that term is used in Section 399.26(d) of the California Public Utilities Code, or a successor provision) or a methodology that the CAISO determines in its sole discretion is substantially similar to the effective load carrying capability methodology.

To note that demand response resources with an ELCC-based QC value will have a must-offer obligation based on their availability, the CAISO proposes to amend section 40.6.4.1 of its tariff to grant the “expected energy” must-offer obligation to these resources. This is the same must-offer obligation that conditionally available resources and run-of-river hydro hold today. The proposed amendments to section 40.6.4.1 are noted below in red underline:

40.6.4.1 Must-Offer Obligation in DAM and RTM

Conditionally Available Resources (irrespective of Use-Limited Resource qualification) ~~and~~, Run-of-River Resources, and Demand Response Resources subject to 40.9.2(b)(1)(D) that provide Resource Adequacy Capacity and that are physically capable of operating must submit Self-Schedules or Bids in the Day-Ahead Market for their expected available Energy or their expected as-available Energy, as applicable, in the Day-Ahead Market and RTM up to the quantity of Resource Adequacy Capacity the resource is providing. Such resources shall also revise their Self-Schedules or submit additional Bids in RTM based on the most current information available regarding Expected Energy deliveries.

An Eligible Intermittent Resource providing Resource Adequacy Capacity may, but is not required to, submit Bids in the Day-Ahead Market.

Stakeholder Comments on applying an ELCC methodology for demand response

ESDER 4 began with a stakeholder web conference held in February 2019 and ended with a last conference in August 2020. In total, six stakeholder web conferences and six on-site stakeholder working groups were held with 10 sets of stakeholder comments received and considered in the refinement of the ESDER 4 final proposal which included an informative discussion of the ELCC methodology. This stakeholder process included at least two presentations dedicated solely to reviewing the results of the two studies completed by E3 during the initiative.

Through this initiative, stakeholder input was solicited and helped form the CAISOs recommendations to the CPUC and other local regulatory authorities regarding the appropriate methodology for establishing qualifying capacity values for variable-output demand response resources. Additionally, the CAISO used the ESDER 4 initiative to propose the changes needed to operationalize variable-output demand response providing resource adequacy if the CPUC and local regulatory authorities were to adopt such a methodology.

Stakeholder comments expressed concern with applying an ELCC methodology for demand response, stating this would be a fundamental shift in how demand response is treated, that it may reduce the qualifying capacity of demand response resources as resource adequacy resources, and that additional details need to be developed. This shift to an ELCC methodology is important and timely given the needs of the transforming grid. Upon completion of the ESDER 4 initiative, the CAISO continued to work with stakeholders and the CPUC to further their understanding of the ELCC study results and its methodology. This understanding has helped in stakeholder discussions on ways to refine a demand response-specific effective load carrying capability methodology to better understand and assess demand response's contribution to reliability.

Through the CAISOs continued engagement with the CPUC in proceedings subsequent to the completion of ESDER 4, certain stakeholders have expressed interest in further considering an ELCC methodology.

Next Steps

In this paper, the CAISO has proposed to obtain tariff authority to exempt demand response resources whose Qualified Capacity (QC) is established using

ELCC counting or similar methodology that accounts for the variability in the capacity available from the resource. This proposal will require submission to the CAISO board for approval of resulting tariff changes.

The CAISO does not believe that the proposal requires an extended stakeholder engagement considering this proposal was included in the ESDER 4 policy initiative. Therefore, the CAISO will hold its final stakeholder call on June 15, 2021 to review this final proposal and solicit comments requested for submission by end of day June 23, 2021.

Management will seek to obtain CAISO Board approval of tariff changes in July in order to file them with FERC soon after, requesting a FERC order by the mid-September so that the tariff change is made effective prior to the submission of year-ahead RA plans for 2022.

Appendix A

ESDER 4

In the ESDER 4 stakeholder process, the CAISO's goal was to demonstrate the importance and ability to modify demand response capacity valuation to consider its variability and energy-limitations, as well as demonstrate how such an approach could be performed. Following the publication of the ESDER 4 final proposal, the CAISO has continued working with stakeholders in regulatory proceedings to refine this methodology for future approval and implementation by local regulatory authorities and the CAISO.

Within ESDER 4 initiative, the CAISO discussed options and proposed how to operationalize and assess the contribution to reliability of variable-output demand response as a resource adequacy resource in the CAISO market recognizing its variable nature and bidding behavior.

The following section, excerpted from the ESDER 4 Final Proposal from section 6.3, published August 21, 2020, describes the current must offer obligations (MOO) for variable-output demand response resources shown on supply plans providing resource adequacy capacity and CAISO's final proposal for treatment of these resources in the event an ELCC, or similar, methodology is used in its QC valuation:

Market Participation and must offer obligations for variable output demand response

Resource adequacy resources have must offer obligations to bid into the CAISO market the amount of net qualifying capacity the resource has shown in their supply plan. Demand response resources on supply plans are required to bid into the CAISO markets according to tariff sections 40.6.1 and 40.6.2. In general, resource adequacy resources are required to bid into the day-ahead market its shown capacity all hours of the day the resource is not on outage. The CAISO allows demand response to bid in the hours specified within their program established by the local regulatory authority. If the resource does not bid its shown resource adequacy in the availability assessment hours, it could be assessed a non-availability charge through RAAIM. Because most if not all demand response programs exhibit variability, and the QC valuation process gives DR a single value for the purposes of RA counting, resources risk being assessed RAAIM penalties in hours they cannot bid all of their shown resource adequacy capacity.

In the event local regulatory authorities adopt the ELCC methodology for determining the qualifying capacity for demand response, the CAISO proposes to address this issue by allowing variable-output demand response resources to bid the amount they are physically capable of providing, rather than the shown amount of net qualifying capacity, in order to meet their must offer obligation. Today, variable energy resources receive similar treatment. Scheduling coordinators for variable energy resources must either use a forecast provided by the CAISO or submit their own CAISO-approved forecast. Bids are submitted every hour, and the forecast is used to set the upper economic limit on these bids, such that the resource is not dispatched above its forecasted capability in any interval. Therefore, the maximum MWs dispatched by the CAISO for a variable energy resource could be at, above, or below the net qualifying capacity value depending on the resource's forecasted output. Wind and solar resources are exempt from RAAIM penalties for local and system resource adequacy. CAISO proposes to adopt similar must offer obligation rules upon adoption of an ELCC methodology by the local regulatory authority.

The CAISO considered two options for the type of real-time data submission required to enable these resources to bid to their capability. The first option would require resources to submit their forecasted capability in real-time on a 15- or 5-minute basis to reflect any updates to

real-time capability after bid submission. Because demand response resource performance is largely dependent on consumer behavior, the CAISO does not have the appropriate visibility into individual resource capabilities to forecast load reduction for these resources. Therefore, the resource scheduling coordinator would need to submit their own forecasted capability. The second option would allow resources to reflect their capability through their bids into the day-ahead and real-time markets. Bids are submitted in hourly granularity. The CAISO has received feedback from stakeholders that many demand response resources do not have intra-hour variability that would require more granular submission of resource capability to ensure feasible dispatches. In this case, it seems unnecessary for resources to provide real-time data after T-75 to reflect their capability. Instead, resources should reflect their capability through their bids, which are submitted on an hourly basis 75 minutes prior to the operating interval for the real-time market.

The CAISO received stakeholder feedback on these two options and based on this input, the CAISO concluded that the second option is appropriate, and will allow variable output demand response to reflect variability through their bids, which are submitted every hour, rather than more frequent data submission of resource availability, such as every 15 or 5 minutes. If capabilities of demand response programs or grid needs shift in the future, the CAISO could revisit this requirement.

Furthermore, the CAISO proposes the scheduling coordinator for the resource submit bids reflective of the resource's capability, as determined by the demand response provider, to fulfill its must offer obligation. The capability of the resource could be at, above, or below the shown capacity value specified in the supply plan. Under this proposal, the CAISO would exempt variable-output demand response that bids its availability from RAIM, similar to wind and solar. If a resource does not have variable-output and can provide consistent load reduction throughout the RA month and year, or is under a counting methodology that does not appropriately reflect their variability, the CAISO proposes the resource bid its full shown resource adequacy value, consistent with the standard 24/7 must offer obligation.

Variable output demand response will be required to bid full capability into both day-ahead and real-time markets, until the proposed revisions to the real-time resource adequacy must offer obligation is implemented in Day-

Ahead Market Enhancements and Resource Adequacy Enhancements.¹²,
¹³ In those initiatives, the CAISO is proposing day-ahead must offer obligations for all resource adequacy resources and real-time must offer obligations for all resources with day-ahead awards. In these initiatives, the CAISO is also proposing a transitional period where the real-time must offer obligation would remain regardless of day-ahead awards until EDAM is implemented, which is targeted for 2024. Upon implementation of those initiatives, variable-output proxy demand resources will be required to bid their full capability in the day-ahead market in all hours it is available and for all products it is eligible for and required to provide. Like other resources, its real-time must offer obligation will be based on day-ahead market awards. Final details of the must offer obligation will be established through the Resource Adequacy Enhancements initiative.

Given the CAISO proposes to exempt variable output demand response resources from RAIM in this initiative, it is important to ensure resources are still incentivized to bid the resources' true capability. In the event the adopted ELCC methodology does not result in these resources bidding their full capability, the CAISO could consider additional means to incentivize availability in other initiatives such as Resource Adequacy Enhancements.

Proposed Revision Request 1280

Proposed Revision Request (1280) was published on August 27, 2020 informing stakeholders of the CAISO's reconsideration of its practice of accommodating Resource Adequacy (RA) credits for capacity not shown on LSE RA plans and on supply plans. Under PRR 1280, changes to section 4.1 of the Reliability Requirements business practice manual (BPM) would only accept "LRA-provided credits against compliance obligations for the LRA's jurisdictional LSEs provided the credits net to zero." These revisions addressed the concerns of the CAISO that the practice of crediting diminished the requirement that RA obligations must be met with RA capacity that are subject to the CAISO RA tariff provisions from

¹² For a detailed description of must offer obligations for RA resources, see the RA Enhancements stakeholder initiative webpage: <http://www.caiso.com/StakeholderProcesses/Resource-Adequacy-Enhancements>

¹³ For a detailed description of proposed new products and eligibility requirements and the real-time must offer obligation, see the Day-Ahead Market Enhancements stakeholder initiative webpage: <http://www.caiso.com/StakeholderProcesses/Day-ahead-market-enhancements>

resources that are both visible and operationally available to the CAISO when and where needed. Unlike all other Resource Adequacy Resources providing RA Capacity, these “credited” RA resources are not shown on a Supply Plan and are, therefore, not subject to CAISO RA tariff provisions. The CAISO has no way of knowing if actual resources back the RA credit and will perform without them being shown on a Supply Plan. Even if these resources do exist, because they are not shown in a plan, they are not subject to the RA must-offer obligation, RA Substitute Capacity obligations, or the resource adequacy availability incentive mechanism (RAAIM) because they are not shown on a Supply Plan. Therefore, credited resources have no tariff obligation to bid into the CAISO markets to enable the CAISO to meet its reliability needs, and if they do not perform, or they underperform, they are not subject to RAAIM Non-Availability Charges. They simply do not have the same incentives or obligations as Resource Adequacy Resources.

Multiple stakeholders objected to PRR 1280 during the BPM change management process and appealed the revisions.

On December 9, 2020, the CAISO Executive Appeals Committee (Committee) ruled to hold the BPM amendments related to PRR 1280 in abeyance until August 1, 2021.¹⁴ The Committee expressed its desire for ISO staff and stakeholders to work together to resolve concerns expressed by both parties in the appeal to the Reliability Requirements BPM changes related to PRR 1280. Therefore, the ruling ensured that BPM amendments would not become effective until the Committee makes a further decision on the appeals on or after August 1, 2021.¹⁵

¹⁴ <http://www.aiso.com/Documents/ExecutiveAppealsCommitteeDecision-PRR1280-Dec092020.pdf>

¹⁵ For additional information on PRR1280 see Executive Appeals Committee Decision FAQs <http://www.aiso.com/Documents/FAQ-Implementation-PRR1280ExecutiveAppealsCommitteeDecision.pdf#search=PRR%201280>