



Stakeholder Comments Template

Resource Adequacy Enhancements

This template has been created for submission of stakeholder comments on the Resource Adequacy Enhancements fifth revised straw proposal that was published on July 7, 2020. The proposal, stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at:

<http://www.caiso.com/StakeholderProcesses/Resource-Adequacy-Enhancements>

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on **August 7, 2020**.

Submitted by	Organization	Date Submitted
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Please provide your organization's overall position on the RA Enhancements fifth revised straw proposal:

- Support
- Support w/ caveats
- Oppose
- Oppose w/ caveats
- No position

Overall, EDF-R generally supports the initiative, but has concerns about the proposal's impact on storage. At the end of the three-day meeting the CAISO acknowledged revisions to storage rules will be needed in coming years when we have more information on storage operations. With that in mind, CAISO should roll back some of the more punitive parts of the storage proposals now and push forward when actual market behavior shows a problem.

Please provide your organization's comments on the following issues and questions.

1. System Resource Adequacy

Please provide your organization's feedback on the System Resource Adequacy topic as described in section 4.1. Please explain your rationale and include examples if applicable.

- a. Please provide your organization's feedback on the Determining System RA Requirements topic as described in section 4.1.1. Please explain your rationale and include examples if applicable.

UCAP needs will be set using the CAISO's production model, and CAISO has not provided any insight on how the production model will handle storage. This is concerning given the significant storage development and contracting occurring right now. It is imperative that the CAISO consider storage up front in the market design, and that stakeholders have adequate time to review, understand and comment on that process. CAISO has not provided an update to this portion of the proposal in several drafts. EDF-R requests that the CAISO provide additional transparency with its next proposal, and that the CAISO outline what information about storage modeling is currently known even if such analysis and policies are incomplete and still in progress. EDF-R is specifically interested in an example that outlines UCAP vs system RA needs over the next few years just to understand how that might change.

- b. Please provide your organization's feedback on the Unforced Capacity Evaluations topic as described in section 4.1.2. Please explain your rationale and include examples if applicable.

With respect to transitioning existing resources to UCAP, EDF-R reiterates its previous support for Option 1 – retaining the current NQC formulation and add adjust it for forced outages to derive the UCAP -- as stated in previous comments.

During the June 10 working group, among CAISO's concerns for Option 1 was the broad scope of the tariff revisions required to effectuate Option 1. EDF-R does not believe that the administrative burden of multiple tariff revisions is a sufficient reason to discount the proposal and suggests that

such concerns could be ameliorated with sufficient vetting and (if necessary) future corrections in errata filings. A more detailed description of the scope of the required tariff changes would aid understanding.

- i. Please provide your organization's feedback on whether the ISO should establish a dead band around a resource's UCAP value given the associated benefits and burdens, as described in section 4.1.2. Please explain your rationale and include examples if applicable.

EDF continues to support the development of a deadband around the resource's UCAP value. The deadband is one of the fairer and more equitable aspects of RAIM and that wisdom should be carried on into the UCAP proposal. The deadband around the target availability factor in RAIM allows a resource to be up to 2% "worse" than the target without incurring a penalty. The UCAP proposal, by contrast, would impose unavailability penalties from the first MW of forced outage. The CAISO should allow some reasonable leeway here (e.g, 2% forced outage rate) before making UCAP adjustments, especially since its reliability models already assume some level of forced outages. (The deadband concept has been applied to other CAISO market features, e.g., Uninstructed Deviation Penalties, for many of the same reasons.)

- ii. Please provide your organization's feedback on Option 1 and Option 2 for calculating UCAP for new resources without three full years of operating history, as described in section 4.1.2. Please explain your rationale and include examples if applicable.

As stated in previous comments, EDF-R continues to support Option 2 – use of NQC – until resources have their own data.

- iii. Please provide your organization's feedback on the ISO's approach to use the historical availability during the RAIM hours for years prior to 2019 and the historical availability during the 20% tightest supply cushion hours in years 2019 and beyond for hydro resources, as described in section 4.1.2. Please explain whether this approach is necessary or preferred to the standard UCAP calculation to reflect hydro availability.

- iv. Please provide your organization's feedback on the modifications for UCAP counting rules for storage resources as described in section 4.1.2. Please explain your rationale and include examples if applicable.

The Fifth Revised Straw Proposal does not mention hybrids specifically, and the CAISO's Hybrid stakeholder initiative defers RA questions to this initiative. EDF-R requests the CAISO provide an example of a UCAP calculation for a hybrid resource with its next proposal.

In section 4.1.2 of the Fifth Revised Straw Proposal the CAISO states "Evaluating the historical performance of a capacity asset during a subset of tight supply cushion hours *captures the correlation of the asset's availability and capability* with all other system factors that drive the tight supply cushion hours" [emphasis added]. It seems reasonable that historical outages would predict future outages, however EDF-R requests that in the next proposal the CAISO demonstrate the correlation does exist using actual generator performance data -- specifically does a resource's historical outage during a tight supply cushion hour actually predict outages during future tight supply cushion hours? Confirming that this foundational assumption is sound is especially important given the CAISO's reluctance to predict or firmly set supply cushion hours.

With respect specifically to storage, EDF-R has held steady concerns through each proposal iteration regarding the UCAP treatment for storage charging. Storage is a uniquely designed resource -- it must be charged to discharge. In section 4.1.7 of the fifth revised straw proposal, the CAISO is proposing a minimum charge requirement for storage resources, that would effectively make DA binding for economically dispatched bids as well as the charge required to dispatch them. If the CAISO moves forward with UCAP counting as proposed, as a dynamic lookback on the tightest supply cushion hours, the CAISO's UCAP counting rules may punish a storage resource for meeting its must offer obligation. Instead, the CAISO proposal should shield storage generators from UCAP forced outage penalties for the charging required for the resource to meet its must offer obligation. Bluntly, storage facilities that are in operation to meet the CAISO's market orders are not on a *forced outage*, rather they are *operating* because charging is a fundamental component of their operation.

The CAISO has proposed minimum charge requirement solution because the real-time market does not have the same forward-looking ability that the day-ahead market does. In other portions of the proposal, the CAISO

acknowledges having limited information on storage behavior. It seems premature to design a potentially punitive system to mitigate behavior that has not been demonstrated to exist. The CAISO concerns may turn out to be unwarranted and EDF-R believes these specific RA changes should only be pursued when actual generator behavior indicates a problem. In this case the CAISO's proposal falls short of putting into action its commitment to supporting storage integration. The proposal penalizes storage for the very characteristics that make it unique and valuable. Storage's ability to take oversupply off the grid in the middle of the day and deliver it at the end of the day when the real-time need is great is best done in an agile way, strict adherence to the day-ahead schedule is not helpful.

Moreover, other generator types are not subject to this obligation, and if the reason for this design is "insufficient real time market technology," then it is the technology that should be improved. Such treatment could be found "discriminatory" in a FERC review, for example solar resources are not penalized when the sun does not shine. If the CAISO proposal does not shield storage generators from charging penalties, the UCAP counting system for storage should identify when that charging can be done. Technology improvement is a simple matter of the project management triangle – new technology products are limited to three basic criteria: speed, cost, and quality -- and any product cycle can pick two. EDF-R encourages CAISO to deploy the highest quality product for integrating storage. Given that storage is coming online soon, but is not yet here, now is the time to expand the real time market look ahead beyond 65-minutes.

- c. Please provide your organization's feedback on the System RA Showing and Sufficiency Testing topic as described in section 4.1.3. Please explain your rationale and include examples if applicable.

- d. Please provide your organization's feedback on the Must Offer Obligation and Bid Insertion Modifications topic as described in section 4.1.4. Please explain your rationale and include examples if applicable.
 - i. Please provide your organization's feedback on generally defining variations to the must offer obligations and bid insertion into the day-

ahead market based on resources type, as described in Table 12 in section 4.1.4. Please explain your rationale and include examples if applicable.

Please see comments in section 1.b.iv

- e. Please provide your organization's feedback on the Planned Outage Process Enhancements topic as described in section 4.1.5. Please explain your rationale and include examples if applicable.

EDF generally supports CAISO's move to align CAISO BA outages with RC outage definitions, the addition of the opportunity outage is a graceful solution and particularly appreciated. EDF-R believes outages that create no system issue should be accommodated without penalty. However, EDF-R also requests CAISO host a workgroup specifically to discuss outage definitions. Outage definitions proposed in this initiative were set in the CAISO's Reliability Coordinator function, and do not reflect sufficient input from CAISO market participants (rather, the CAISO's RC proceedings were generally geared toward and attended by TOPs and BAs).

There are still some matters that warrant discussion For example, the CAISO's current proposal allows for forced outage exemption for earthquake damage once every three years – yet an earthquake certainly meets the definition a *force majeure*. The proposal also has no exemption for wildfire or for transmission outages (even when the outage is not caused by the generator.) EDF-R believes outage root causes should be correctly assigned and proposes that the best way to come to an agreement on those root causes is in a separate workgroup.

EDF also requests CAISO include all outage types on the Curtailed and Non-Operational Generating Units report.

- f. Please provide your organization's feedback on the RA Import Requirements topic as described in section 4.1.6. Please explain your rationale and include examples if applicable.
 - i. Please provide your organization's feedback on the issue of whether firm transmission service on the last line of interest to the CAISO BAA will ensure reliability and is feasible, or whether the CAISO should require

point-to-point, source to sink firm transmission service as originally proposed, as described in section 4.1.6 page 68. Please explain your rationale and include examples if applicable.

- ii. Please provide your organization's feedback on other BAA's systems bordering the CAISO and whether such a "last line of interest" proposal is feasible and would effectively support RA import capacity dependability and deliverability, as described in section 4.1.6 page 68. Please explain your rationale and include examples if applicable.

- iii. Please provide your organization's feedback on whether a non-compliance penalty or other enforcement actions are necessary if delivery is not made under firm transmission service, as described in section 4.1.6 page 69. Please explain your rationale and include examples if applicable.

- iv. Please provide your organization's feedback on how to convey the last line of interest, as described in section 4.1.6 page 69. Please explain your rationale and include examples if applicable.

- v. Please provide your organization's feedback on the options proposed in section 4.1.6 and any other potential mechanisms that would best ensure RA imports are dependable and deliverable if the CAISO were to adopt, as an alternative, a "last line of interest" firm transmission service requirement. Please explain your rationale and include examples if applicable.

- g. Please provide your organization's feedback on the Operationalizing Storage Resources topic as described in section 4.1.7. Please explain your rationale and include examples if applicable.

[Please see comments in section 1.b.iv](#)

2. Flexible Resource Adequacy

Please provide your organization's feedback on the Flexible Resource Adequacy topic as described in section 4.2. Please explain your rationale and include examples if applicable.

3. Local Resource Adequacy

Please provide your organization's feedback on the Local Resource Adequacy topic as described in section 4.3. Please explain your rationale and include examples if applicable.

- a. Please provide your organization's feedback on the UCAP in Local RA Studies topic as described in section 4.3.1. Please explain your rationale and include examples if applicable.

4. Backstop Capacity Procurement Provisions

Please provide your organization's feedback on the Backstop Capacity Procurement Provisions topic as described in section 4.4. Please explain your rationale and include examples if applicable.

- a. Please provide your organization's feedback on the Capacity Procurement Mechanism Modifications topic as described in section 4.4.2. Please explain your rationale and include examples if applicable.
- b. Please provide your organization's feedback on the Making UCAP Designations topic as described in section 4.4.3. Please explain your rationale and include examples if applicable.
- c. Please provide your organization's feedback on the Reliability Must-Run Modifications topic as described in section 4.4.4. Please explain your rationale and include examples if applicable.

- i. Please provide your organization's feedback on an appropriate availability incentive design to apply to RMR resources after the removal of the RAIM tool, as described in section 4.4.4. Please explain your rationale and include examples if applicable.

 - d. Please provide your organization's feedback on the UCAP Deficiency Tool topic as described in section 4.4.5. Please explain your rationale and include examples if applicable.
5. Please provide your organization's feedback on the implementation plan, including the proposed phases, the order these policies must roll out, and the feasibility of the proposed implementation schedule, as described in section 5. Please explain your rationale and include examples if applicable.

 6. Please provide your organization's feedback on the proposed decisional classification for this initiative as described in section 6. Please explain your rationale and include examples if applicable.

Additional comments

Please offer any other feedback your organization would like to provide on the Resource Adequacy Enhancements fifth revised straw proposal.