California ISO

**Comments of the California Energy Storage Alliance on the Resource Adequacy Enhancements Initiative**

| Submitted by | Organization | Date Submitted |
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**Please provide your organization's comments on the following issues and questions.**

**1. Production Simulation: Determining UCAP Needs and Portfolio Assessment**

Please provide your organization's feedback on the Production simulation: Determining UCAP needs and portfolio assessment topic as described in slides 4-15. Please explain your rationale and include examples if applicable.

CESA supports the use of the Summer Assessment and the PLEXOS model as the foundations for the unforced capacity (UCAP) needs and portfolio assessments. It is reasonable to leverage existing models and practices that relate to the assessment of needs and extrapolate their application for the UCAP framework. CESA supports the ISO's intention to evaluate different sensitivities related to imports.

During the June 10, 2020 call, the ISO noted it has not been able to work on providing additional details on the models' ability to represent energy storage resources. CESA urges the ISO to continue this work in order to provide stakeholders a better perspective within the Fifth Revised Straw Proposal. Without increased transparency on the models' treatment of energy storage assets, it is difficult for industry stakeholders to provide substantial feedback that could ease the transition to a UCAP scheme.

The ISO also did not clarify if the modeling proposed would be done on a yearly or monthly basis. Considering RA obligations are set to be shown on a monthly basis, CESA believes this modeling exercise should be done in a monthly basis, as it would provide increased certainty to buyers and sellers of RA. In the same call, the ISO noted that the stochastic modeling will consider a wide range of weather conditions, potentially simulating most of the possible monthly conditions. Because of this, a monthly run might not be necessary if the ISO reports the UCAP requirements on a yearly basis (*i.e.*, reporting the overall probability resulting from the model) and a monthly approximation (reporting values by weather type or cohort based on expected monthly conditions).

CESA is also supportive of the ISO's intention to use this modeling scheme to both set RA requirements and trigger backstop procurement. This alignment would ease compliance and understanding of the RA framework as well as ensure the proper level of resources has been procured ahead of the RA compliance deadlines. CESA looks forward to continue collaborating with the ISO in this process.

## 2. Transitioning to UCAP Paradigm

Please provide your organization's feedback on the transitioning to UCAP paradigm topic as described in slides 16-19. Please explain your rationale and include examples if applicable.

During the stakeholder meeting, the ISO presented two options for transitioning to the UCAP framework. Option 1 would involve a two-step de-rate process to the assets' qualifying capacities (QCs) to account for deliverability and non-availability. The ISO noted that this process is beneficial as it would maintain the NQC language thus limiting the impact to existing contracts; nevertheless, it could generate future confusion since "NQC" would hold two meanings depending on the context. Option 2, on the other hand, would apply a non-availability de-rate to the existing NQC value, resulting in the UCAP value. This would remove ambiguity from a potential dual meaning of the "NQC" term; however, it may require the revision of existing contracts.

CESA believes that Option 1 is the most reasonable transition pathway at this time since it ensures the continuance of existing contracts and it limits the potential risks associated with bilateral transactions. Regarding the ISO's concern of potential confusions derived from the dual use of "NQC", CESA believes these may not be as severe once the ISO's tariff is reworded to clarify that must-offer obligations (MOOs) will be tied to the asset's deliverable QC (DQC) while the product transacted and shown will be evaluated given its NQC (*i.e.*, UCAP value).

In the same call, the ISO highlighted its commitment to a "clean" transition to a UCAP system. This would mean that there will be no transitional accounting methodologies and the RA program would change from NQC to UCAP within one compliance year (specifically, from 2022 to 2023). CESA supports a clean transition; however, this must be done in alignment with the current RA proceeding at the California Public Utilities Commission (CPUC). CESA urges the ISO to work closely with the CPUC on this issue to ensure clarity and certainty during this transition.

## 3. Unforced Capacity Evaluations

**a.** Please provide your organization's feedback on the UCAP methodology: Seasonal availability factors topic as described in slides 27-46. Please explain your rationale and include examples if applicable.

CESA supports the use of seasonal availability factors for the establishment of UCAP values. It is reasonable to separate on- and off-peak as both resource availability and grid needs vary significantly between these two seasons.

CESA, however, has reservations regarding the proposed methodology to assess need based on the top two deciles of hours with the tightest supply cushion. During the call, the ISO noted that this methodology would better incentivize resources to "always be available" and it would provide a better snapshot on needs. CESA considers that these two assessments, while potentially true, do little to provide certainty to operators as to when their resource is most needed and to when their outages would be most harmful for their UCAP value. It is also noteworthy to point out that the ISO mentioned the number of hours included in that 20% will vary widely between the off- and on-peak months; that is, a different absolute number of hours will be assessed for each period. These two considerations could lead to an opaque determination of UCAP values, increasing the risk operators face.

In order to mitigate this, CESA does not support an approach that would evaluate all hours; instead, CESA urges the ISO to publish a histogram or table that illustrates when these hours are located in both the on- and off-peak seasons once the yearly run has been done. This would give some clarity to operators while maintaining the methodology proposed by the ISO as it more accurately reflects actual reliability risks.

Regarding the approach to approximate the UCAP value of new resources, the ISO presented two methodologies. Option 1 would base the UCAP value on class averages while maintaining the weighing methodology/values. Option 2 would start with the NQC and place a heavy emphasis on the resource's performance during its initial years. The ISO noted that the potential trade-off between these two methodologies is mostly related to the possibility of initially overvaluing an asset versus initially undervaluing it. Furthermore, the ISO noted that several stakeholders have raised concerns over the application of Option 1 to storage resources, as it could lead to systematic undervaluing of brand-new assets due to the operation of other, older resources. Considering these limitations, CESA believes Option 2 would be better positioned to reflect the actual UCAP of new storage assets since it will not tie their value to the performance of resources prior to the application of the UCAP framework. Moreover, Option 2 is better suited to immediately incent continuous availability, positioning resources to maintain their UCAP value high.

**b.** Please provide your organization's feedback on the UCAP methodologies for non-conventional generators topic as described in slides 47-59. Please explain your rationale and include examples if applicable.

During the call, the ISO noted the need to incorporate state-of-charge (SOC) of storage resources into their UCAP calculations. CESA is strongly opposed to this proposal, as it has not been fully developed, it is not aligned to other SOC-related proposals considered in this and other initiatives (*e.g.*, Energy Storage and Distributed Energy Resources), and it seeks to micromanage the operation of energy storage assets instead of utilizing price signals and market

mechanisms to ensure the flexibility inherent to energy storage serves broader grid needs.

CESA would like to highlight is unclear how the ISO would treat storage assets that have been optimized to be dispatched during hours that are used within the UCAP assessment framework. The ISO has not elaborated on this idea enough to provide certainty as to the effects of optimal market dispatch and bidding when adopting its proposal to further de-rate the UCAP value of energy storage resources. CESA considers the following example must be explicitly addressed by the ISO.

> A storage resource has been set up to start Hour 1 with 100% SOC. Hour 1 is not considered for UCAP valuation. Over the course of Hour 1 the resource is optimized to be dispatched fully, reaching a 0% SOC by the end of Hour 1. The storage resource starts Hour 2 with a 0% SOC. Hour 2 is considered for UCAP valuation.
>
> What will be the impact of this scenario on the storage asset's UCAP value?

If an asset's SOC is the result of market dispatch, it should not affect its UCAP value, as the resource bid into the market and dispatched following ISO instructions; however, it is not clear that will be the case. CESA urges the ISO to further develop this proposal for the Fifth Revised Straw Proposal paper and welcomes the opportunity to further work with the ISO in this initiative to come up with market-centric ideas that will ensure the flexible and reliable operation of energy storage.