The National Hydropower Association (NHA) submits the following comments in response to CAISO’s fifth revised straw proposal on resource adequacy enhancements. NHA takes no position on the proposal as a whole. However, our members have concerns with specific aspects of the proposal related to the planned outage enhancement process in Section 4.1.5.

Revised Planned Outage Process

NHA appreciates CAISO’s intent on planned outage process enhancements which is to “facilitate outage coordination and provide the greatest certainty regarding the timing of planned outages” (5th rev. straw proposal, at 49). In Option 1, CAISO proposes a planned outage reserve margin for off-peak months and only allows short-term and off-peak opportunity outages from June 1 to October 31. For the reasons below, NHA opposes Option 1 as it could discourage proper stewardship of hydroelectric resources, limits hydro owners’ ability to effectively maintain their units and could make forced outages more likely.

Option 1 complicates water and environmental considerations and could cause maintenance “stacking”

CAISO’s Option 1 would prohibit an entity from taking a planned outage between June and October if it wanted to sell RA in any of those months. Hydroelectric resources generally take planned outages in low flow periods such as September and October. There are many reasons for this including: watershed hydrology, water management concerns, environmental considerations, water deliveries and maximizing energy output. September and October are low flow periods. These periods can support anadromous salmonid spawning in certain parts of the state. Thus, annual maintenance inspections and outages are typically scheduled for this time when requirements for instream minimum flows are the lowest (September and October).

If CAISO’s Option 1 were adopted, hydro owners wanting to sell RA in summer months would be forced to stack all planned outages in the winter months. This is concerning to hydro operators due to expected weather and labor issues that will impact planned outages in the winter. First, shifting maintenance work to the fall and winter will mean hydro operators will need to pack the outages into a smaller window of time. The labor force that focuses on hydro-related maintenance, inspections, safety and other areas is finite. Hydro owners will be competing for a limited resource pool at the same time. In addition, some hydro owners have labor contracts that may make it difficult to avoid outages during the summer months. Second, weather patterns in the winter months can make it more difficult for certain maintenance to occur due to higher precipitation which can limit access to critical project areas.

If hydro owners are encouraged to pack the maintenance into 7 months, it is likely that more maintenance will be deferred, making these facilities more susceptible to forced outages.
In addition to these concerns, NHA has the following questions regarding Option 1:

- How would long duration, major overhaul outages longer than 7 months be handled?
- How would regulatory and environmental outage requirements and restrictions that push outages into the summer be handled?
- If RA substitution and RAAIM, used to backfill or incentivize RA, go away as is proposed, will this impact hydro’s ability to sell RA for the planned outage period in November? If no substitution RA exists, will resources be able to show RA for a unit in outage even in the off-peak season (November – May)?
- How will system reliability be impacted if a majority of hydro resources take planned outages in the same time frame in off-peak months?

**Considerations for Option 1**

For the reasons listed above, NHA supports CAISO keeping the existing planned outage process. Many proposals have been developed by CAISO and stakeholders. NHA believes these proposals cause more uncertainty and complexity compared to the current outage substitution process. Owners and operators of resources that CAISO depends on need operational flexibility to properly maintain their units. Setting burdensome limits and strict parameters around when and how a resource may sell RA or take a planned outage will only make it more difficult for these owners to properly maintain their assets so they operate at their maximum efficiency.

If CAISO opts for keeping the status quo, NHA believes the planned to forced outage issue needs additional consideration and reform. If CAISO adopts Option 1, the ISO should consider not classifying October as a peak month to allow hydro resources the ability to sell RA when the system needs its most while also being able to take planned outages when its operationally and environmentally efficient.

**Outage Definitions**

*More clarity is needed in proposed outage definitions*

NHA encourages CAISO to provide additional clarity on urgent and planned outage definitions. In addition, UCAP assessments should provide incentives for generators to be available during times of high system stress and not penalize owners for factors outside of their control. Allowing transmission outages to impact a generator’s UCAP will only serve to penalize a resource based on where it was historically located rather than what UCAP should do, which is encourage operators to take actions to be available when the system needs them.

**Conclusion**

NHA encourages CAISO to provide further clarification of rules, penalties and the UCAP counting methodology for hydro. For this reason, we encourage CAISO to develop a 6th straw proposal and we request that the ISO consider NHA’s comments and questions in the proposal. In addition, although not part of this proposal, NHA continues to support CAISO’s proposal to require all import RA to specify the specific unit, aggregation of units, or the source balancing authority area. These restrictions should weed out speculative import supply, thus helping with CAISO system reliability while ensuring that the price of real physical supply isn’t artificially suppressed due to speculative supply.