



California ISO

Hybrid Resources Final Proposal

Stakeholder Web Conference

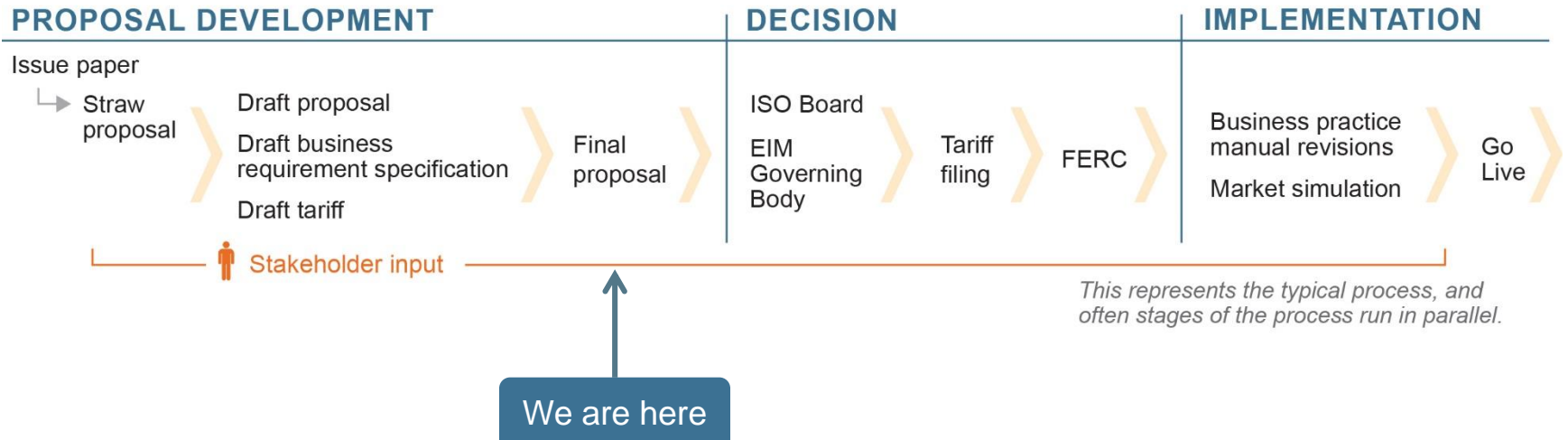
October 15, 2020

Gabe Murtaugh

Agenda

Time	Agenda Topic	Presenter
10:00 - 10:05	Welcome and Introduction	James Bishara
10:05 - 10:10	Hybrid policy timeline	Gabe Murtaugh
10:10 - 11:55	Updates from the draft final proposal	Gabe Murtaugh
11:55 - 12:00	Next Steps	James Bishara

ISO Policy Initiative Stakeholder Process



Timeline for hybrid resources initiative

Date	Item
10/5/20	Publish final proposal
10/15/20	Public stakeholder call for final proposal
10/29/20	Comments due for final proposal
11/4/20	EIM GB Meeting
11/18/20	Board of Governors Meeting
12/1/2020	Implementation of co-located constraint (Energy only)
2/1/21	Co-Located Storage Deviation – Tariff Approval
Fall 2021	Remaining implementation for hybrid policy

UPDATES FROM THE DRAFT FINAL PROPOSAL

There were small updates and clarifications from the draft final to the final proposal for hybrid resources

- Most of the changes specified how and when outage cards could be used for hybrid resources
 - Significant amount of stakeholder concern regarding onus of previously proposed use of the outage management system (OMS)
 - ISO developed policy that will relieve this burden
- Stakeholders requested additional functionality to allow co-located storage resources to deviate from dispatch
 - The ISO is not able to make further allowances for these resources
- Several stakeholders submitted feedback on high sustainable limit white paper
 - ISO continues to update this document with specific mechanics for how the high sustainable limit will work once implemented

The ISO is proposing updates to the rules for outages and the dynamic limit tool

- Hybrid resources may have variable generation and state of charge requirements to manage
- Dynamic limits will inform the ISO about unavailability of hybrid resources because of underlying components
 - Dynamic limits may be submitted to the ISO to account for ambient unavailability, variable unavailability, on-site charging, or unavailability due to state of charge
 - This tool could be used to describe solar unavailability through the nighttime hours, and would result in no need for OMS outage cards
 - [Dynamic limit tool will continue to apply to bids in the real-time market](#)
- OMS outages would still be used for mechanical issues on hybrid resources
- These updates reduce burden of OMS submissions

Hybrids only need to submit outage cards through OMS for mechanical outages in the day-ahead market

- Hybrid resources should specify availability in the day-ahead market through market bids
 - ISO will not commit hybrid resources for capacity beyond day-ahead bids in the RUC market, as additional capacity may be unavailable
- Outage cards will not be necessary for ambient unavailability, variable unavailability, on-site charging, or unavailability due to state of charge in the DA market
 - This unavailability should be signaled through bids
- Outage cards will be necessary for mechanical outages

Hybrid resources will not be subject to RAAIM, and RAAIM will be replaced by UCAP in 2023

- Today ISO uses RAAIM to incentivize participation in the day-ahead and real-time markets for RA resources
 - RAAIM is assessed on bid availability in both markets
- CPUC counting rules already account for ELCC and charging for hybrid resources
 - The hybrid capacity is already reduced to account for variable generation
- Hybrid resources will not be subject to RAAIM because of the reduction in capacity that is being applied by the CPUC

Dynamic limits will be included in resource adequacy unforced capacity calculations in the future

- One key concern from comments was ensuring that dynamic limit unavailability was applied to RA capacity
- RA enhancements (RAE) policy initially proposed to use OMS data to construct resource adequacy capacity values for unforced capacity (UCAP)
 - Initial proposal to handle all outages for resources through OMS data was driven by this RAE construct
 - Hybrid policy team and the resource adequacy team coordinated on a potential solution for this concern
 - Calculations for UCAP will include dynamic limits for hybrid resources when new counting rules go into place (RA year 2023)

Several stakeholders suggested additional allowances for co-located storage to deviate from dispatch

- Functionality to allow co-located storage to deviate down is still included in the final version of the proposal
 - This rule is still being proposed, when very specific conditions exist
- The ISO is not including additional provisions allowing co-located storage to deviate in the upward direction
 - This functionality could result in storage resources with a lower state of charge than anticipated by the market software and could have potential reliability consequences

Next steps

- All related information for the hybrid resources initiative is available here: <http://www.caiso.com/StakeholderProcesses/Hybrid-resources>
- Please submit stakeholder written comments on today's discussion and the hybrid resources draft final proposal by **October 29, 2020**

Important – Please review new process for submitting comments

- Provide comments using the new stakeholder commenting tool
- First-time users must register using their email address in order to submit comments on initiatives
- The commenting tool is located on the Stakeholder Initiatives landing page (click on the “commenting tool” icon):
<https://stakeholdercenter.caiso.com/StakeholderInitiatives>