



# Decision on hybrid co-located resources proposal

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## Management is developing two different models for generation with different technology types at the same location

- Co-located resource – Individual resource ID for each generator behind a single point of interconnection
  - Each component will be modeled similar to other resources on the grid today
  - ISO Board decision in July, Fall 2020 implementation
- Hybrid resource – A single resource ID aggregating multiple generators at a single point of interconnection
  - ISO has visibility to a single resource which can allow flexibility for hybrid resource management
  - ISO Board decision in November, Fall 2021 implementation

## Co-located resources proposal falls under the EIM Governing Body's advisory role

- Under the co-located resources proposal, the ISO will provide new functionality to manage multiple resources behind a point of interconnection
- New functionality will be available to the ISO and EIM balancing authority areas
- Rules apply generally to the entire market, therefore proposal falls under EIM Governing Body's advisory role

## Management proposes that co-located resources be constrained by limits at the point of interconnection (POI)

- Under current rules, resources are constrained so aggregate Pmax values are less than the POI limits
- Proposal manages dispatches of co-located resources to be within POI limits allowing Pmax of each resource up to POI limit
  - POI limit will be implemented as a constraint in market model
  - Resources will be priced at the POI
- Initial implementation in Fall 2020 will limit new functionality to energy dispatches
  - Full constraint, including ancillary services, planned for Fall 2021

# Stakeholders support new policy for managing co-located resources, but have remaining concerns

- **Policy implementation timeline**
  - Some stakeholders believe policy is moving too fast
  - Some stakeholders want ancillary services functionality available for 2021 operational year
- **Functionality to allow storage resources to absorb differences between VER forecasts and actual output**
- **Pricing resources at POI instead of resource node could incent resources to deviate from dispatch (DMM concern)**
  - Downstream of POI is not ISO controlled grid
  - Would price co-located resources different than hybrid resources
  - Physical equipment required to maintain dispatch within POI limit

# Stakeholders request for the authority to allow storage resources to deviate from dispatch must be carefully considered

- Functionality exists for resources that select the hybrid resource option
- Without limitations, several ISO systems could be impacted
  - Unpredictable state of charge could impact unit commitment
  - State of charge uncertainty may preclude ancillary service awards
  - Significant new functionality needed if the energy is settled as instructed energy vs. uninstructed energy
- Management will consider this request in the ongoing hybrid initiative

## Management requests the Board approve the co-located resources proposal

- Co-located proposal will provide new functionality to efficiently manage resources located at the same POI
- Conservative implementation approach will allow for the ISO and market participants to learn how to best manage these new resource configurations before addition additional functionality
  - ISO will provide a report out after the first year of experience with co-located resource operations
- Management will consider enhancements for 2023 interconnections