

# WESTERN ENERGY IMBALANCE MARKET

## Briefing on aggregate capability constraints for co-located hybrid resources and decision on advisory role

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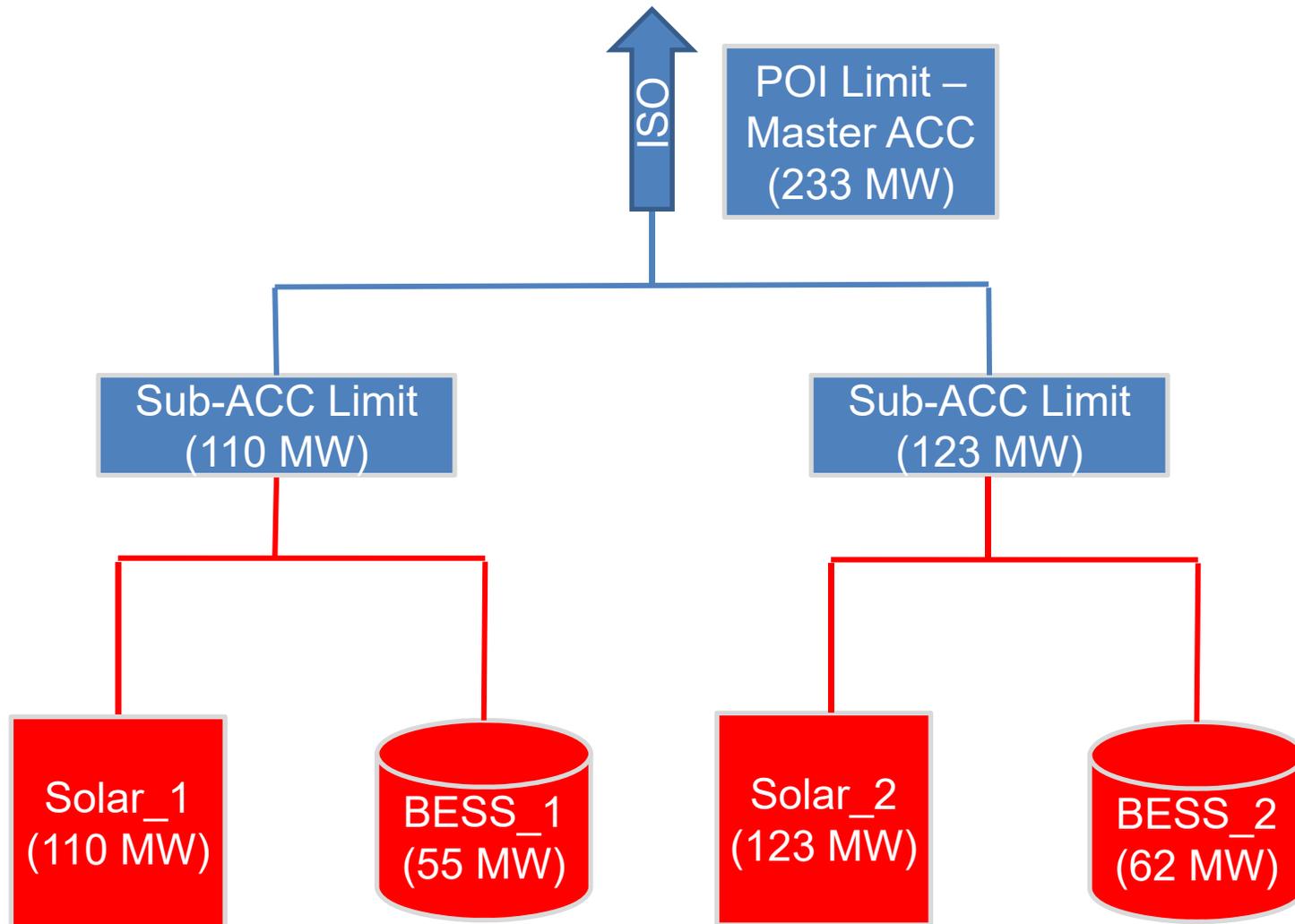
## The ISO developed and implemented new functionality to manage hybrid co-located resources

- Policy includes provisions to prevent “oversized” co-located generation from exceeding studied interconnection limits
  - The aggregate capability constraint functionality was implemented in Fall 2020
- Additional functionality will be in place to allow ancillary services in Fall 2021

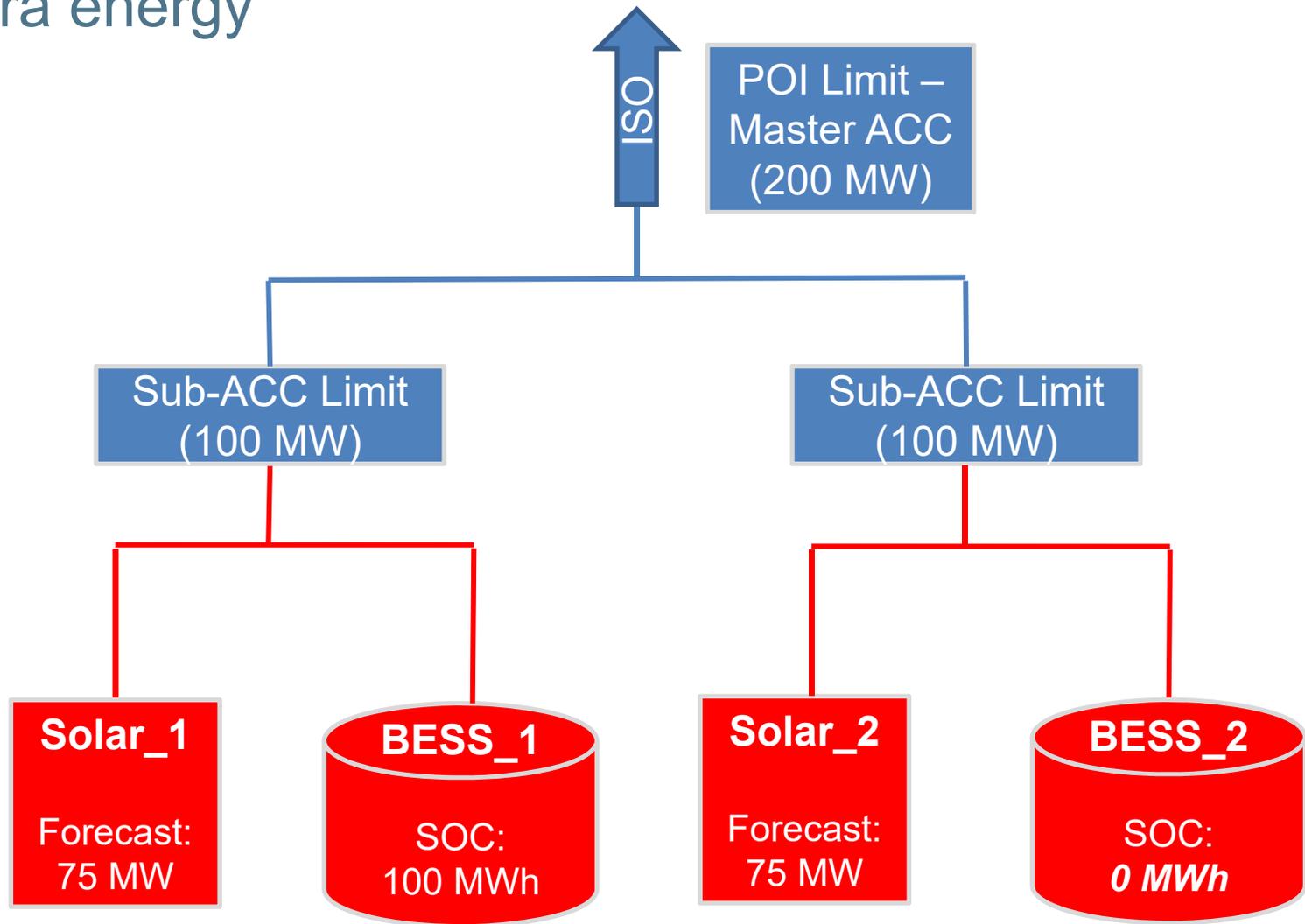
## Stakeholders requested the ISO develop subordinate aggregate capability constraints for co-located resources

- Developers are contracting with off-takers for fractional shares of resources **and** interconnection limits
- This is prevalent for large energy projects with solar and storage at the same location
- Responding to stakeholder requests, Management proposes new functionality to model contractual limits
  - Master aggregate capability constraint will model point of interconnection limits
  - Sub-aggregate capability constraint will model contractual limits

# New provisions will allow dispatch of co-located resources with contractual limitations



When reliability is at risk, the ISO market can relax sub-aggregate capability constraints to schedule extra energy



## Management proposes functionality to enable access to available energy under emergency scenarios

- The ISO market software will enforce fixed master aggregate capability constraints
  - The ISO has procedures to temporarily re-evaluate point of interconnection constraints in emergency scenarios and these may be re-evaluated using the same process
- The ISO market software can relax subordinated aggregate capability constraints for reliability concerns
  - When the market software cannot find sufficient supply to match demand, it may relax these modeled contractual limits



## Management requests the EIM Governing Body support the proposed enhancements to the co-located resource model

- Adding the sub-aggregate capability constraint to the co-located model will facilitate contracts for fractional shares of resources
- Proposal includes provisions to access available energy under emergency conditions to support reliable grid operations