Briefing on commitment cost and default energy bid enhancements

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OVERVIEW

Objective: Comprehensive solution to ongoing commitment cost and DEB issues

- Suppliers need more flexibility to reflect unique costs and volatility
  - Support integration of renewable resources through incentivizing flexible resources participation during tight fuel supply
  - Account for costs of flexible resources (gas and non-gas) to reduce risk of insufficient cost recovery
  - Encourage participation of non-RA and voluntary EIM resources
- ISO needs to comply with FERC Order 831
  - Requires supporting verified costs of energy bids above $1,000/MWh

Objective: Comprehensive solution to ongoing commitment cost and DEB issues cont.

- ISO has implemented several incremental changes to bidding rules over the past decade
  - Stakeholders maintain incremental changes have been insufficient to resolve concerns
  - The California ISO is committed to pursuing comprehensive changes to resolve bidding rule concerns
- ISO must comply with FERC Order 831 to increase bid cap and implement an ex ante and ex post verification process for *cost-based* energy bids

Background

- Since 2007, twelve stakeholder initiatives have been led by the ISO centered around bidding rules
  - Bidding flexibility
  - Market based offers for commitment costs
  - After-the-fact recovery process
  - A new market power mitigation structure
- *Aliso Canyon Phase 3* Draft Final Proposal
  - Highlighted concerns with bidding flexibility during periods of electric and gas constrained areas
  - Supported in concept by stakeholders
  - Support is dependent on the design proposed in this initiative

Current design restricts supplier's from being able to accurately reflect cost expectations

- California is only ISO that does not support market based commitment costs bids subject to mitigation
- Current bidding rules restrict suppliers from reflecting estimated costs and business needs
  - Expanding EIM
  - Increasingly diverse supply resources
- Overly limiting bid prices can:
  - Undermine market efficiency
  - Discourage participation by non-resource adequacy resources and voluntary EIM resources

Current ISO bidding rule and mitigation design

- Energy bids
  - Hourly market-based energy bids limited by cap subject to local market power mitigation test
  - Under uncompetitive conditions, market-based energy bids are replaced with default energy bids
- Commitment cost bids
  - Daily cost-based commitment cost bids are subject to cap of 125% of the ISO calculated proxy costs
  - Applied for competitive/uncompetitive conditions

Type	Sub-type	Market Based Offer	Cost Based Offer
Energy	Variable Cost	X	
MLC	Variable Cost Fixed Cost		X
TC	Fixed Cost		X
SUC	Fixed Cost		X

ISO is not pursuing Market Monitor's recommendation

- Market Monitor proposed:
  - Make permanent Aliso Canyon temporary measure allowing ISO to manually use approximation of next day index
  - Apply Monday premium based on statistical difference between same-day/ intra-day/ Monday trades relative to next day index
  - Create and publish a real-time gas price index
  - Provide more guidelines for the after-the-fact filing right at FERC
- ISO not pursuing due to:
  - Regulatory concerns with no oversight of non-indexed trades to mitigate risk of artificial prices if implemented
  - Too excessive of implementation effort and investment needed to become gas index publisher in addition to core business
  - Could not be implemented until Fall 2018 delaying long-term

ISO proposes to allow market based offer for “three-part bid” subject to mitigation and allow greater flexibility to negotiate or adjust each component to support market efficiency

	Type	Sub-type	Market Based Offer	Cost Based Offer
Hourly	Energy	Variable Cost	X	Mitigated Price
Hourly	MLC	Variable Cost Fixed Cost	X	Mitigated Proxy Cost
Daily	TC	Fixed Cost	X	Mitigated Proxy Cost
Daily	SUC	Fixed Cost	X	Mitigated Proxy Cost

Change minimum load bids from daily to hourly subject to current real-time re-bidding rules

- Continue to include one component for cost associated with operating at minimum operating level
- Treat minimum load component as an hourly value
  - Change the bid component to an hourly type
  - Hourly component for the combined costs associated with power production as well as short-term fixed costs for a run hour
  - Ability to not bid in particular hours

Add negotiated option for commitment proxy costs

- Provides better bidding flexibility
  - May allow supplier to reflect complex costs in bid submission
  - Leverages existing systems that calculate DEBs and proxy commitment costs but allows for similar flexibility in proxy costs as that provided for DEBs today
- Add new negotiated option for commitment proxy costs so that:
  - Commitment bids mitigated to either a negotiated or estimated option for proxy costs
  - Energy bids mitigated to higher of the competitive LMP or either a negotiated, variable, or LMP option for default energy bids
- Negotiated option is for purpose of reflecting system differences in cost formulation not volatility

Allow supplier provided ex ante adjustments to either DEBs or commitment proxy costs

- Ex ante adjustments to either DEBs, NDEBs, proxy costs, or negotiated proxy costs
  - DEB or NDEB adjustments will be vehicle for submitting cost-based energy offers above $1,000 subject to verification requirements to comply with Order 831
- Provides better bidding flexibility balanced against need to protect against artificial price impact
  - May allow supplier to reflect gas system limitations or scarcity in bids to improve dispatch
  - Maintains control of calculations
- Balances implementation by limiting on-going ex ante and ex post manual verifications needed

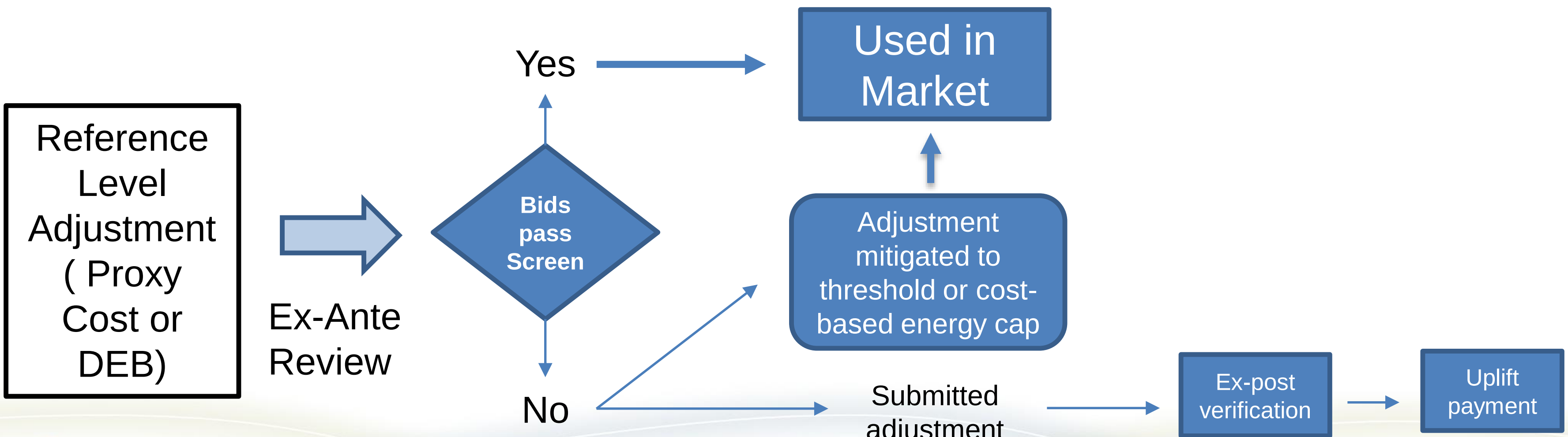
Straw proposal also includes provisions for compliance with FERC Order 831

- Allow supplier provided ex ante adjustments to either DEBs or proxy commitment costs
  - Develop according to set guidelines
  - Subject to automated ex ante reasonableness validation
- Ex post cost-based bid verification process
  - Used for bids that fail ex ante automated screening
  - Verified costs included in uplift payment
  - Make permanent provisions for suppliers to file with FERC for recovery of energy costs above mitigated price or cap that CAISO cannot verify
- Ex ante verified cost-based bids above $1,000/MWh and up to $2,000/MWh can set prices

Competitive conditions

Uncompetitive conditions without reference level adjustment

Uncompetitive conditions with reference level adjustment



Policy recommendation for commitment cost mitigation to allow for market based offers

- Propose mitigation of commitment costs
  - Allow suppliers to submit market-based commitment cost bids
  - Apply dynamic market power mitigation test to market-based commitment cost bids
  - Test critical constraints in the dynamic competitive path assessment
- Including commitment cost mitigation contingent upon evaluating feasibility and costs
  - Information to be included in Draft Final Proposal
  - If cost benefit analysis indicates feasibility, implementation could be phased
    - At minimum – reference level design implemented fall 2018
    - Full implementation with mitigation test could be implemented later to ensure resources allocated for reference level design enhancements

ISO seeking MSC guidance on

- Effectiveness of straw proposal in allowing sufficient flexibility to reflect suppliers' cost expectations in market
- Effectiveness of straw proposal to reflect fuel availability constraints in market
  - Pros and cons of restricting reference levels to estimates based on next day indices or same day trades on ICE
  - Pros and cons of reflecting scarcity when gas companies issuing flow orders
- Effectiveness of straw proposal to capture potential of minimum load energy to exercise market power