



# Commitment costs and default energy bid enhancements

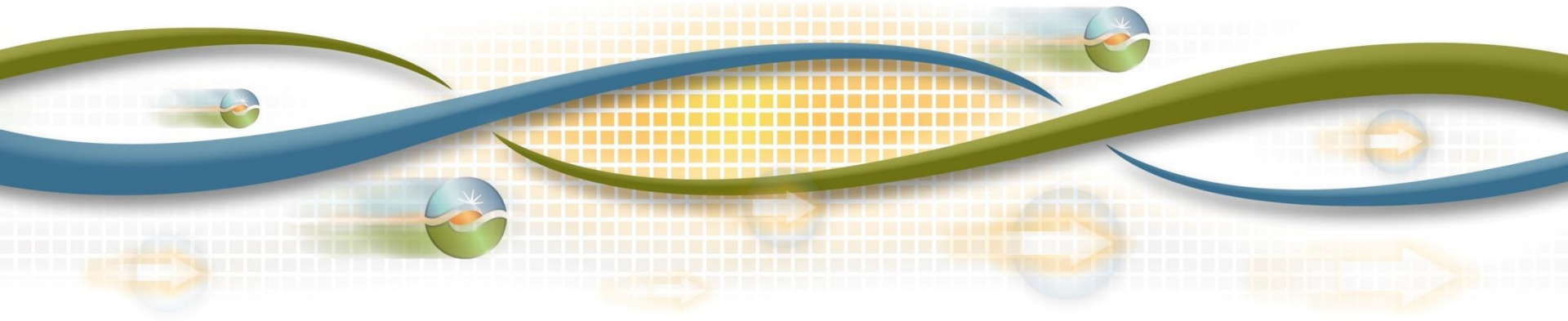
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Market Design and Regulatory Policy

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# Commitment Costs and Default Energy Bid Enhancement

- Initiative to address stakeholder concerns with ISO's market design features impacting bidding flexibility
- Bidding Flexibility includes design features that:
  - Balance allowing:
    - Suppliers to submit economic prices reflecting their willingness to provide energy at a given price
    - Market to protect against structural or behavioral issues
  - Ensure mitigated prices are reasonable reflections of suppliers' cost expectations
- Goal: evaluate ISO's bidding flexibility design and assess whether modifications should be pursued

# Summary of Issues

Assets may not be appropriately valued in market →

1. Limitations might exist due to commitment cost market power mitigation where commitment cost mitigation may be overly restrictive
2. Limitations might exist where the market power protections are insufficient where exceptional dispatch mitigation may not be restrictive enough
3. Limitations might exist due to reference level design for commitment costs and energy costs where reference levels exclude price impact of externalities
4. Limitations might exist due to reference level design for commitment costs reference levels may not reasonably reflect cost expectations

## Summary of Issues Cont.

- Assets may not be appropriately valued in market
  - Commitment Cost Treatment: Method used to mitigate commitment costs may result in over-mitigation of units that limits ability to submit prices based on willingness to sell
  - Commitment Proxy Cost and Default Energy Bid Calculation: Method of determining the mitigated price has several limitations imposing a larger price risk on them to potentially incur losses Are you referring to DEB method also? Should state
- Inaccurate valuation → reducing market efficiency and potentially compromising cost recover

# Proposed Design Principles

- Under competitive conditions, supply offers that include additional valuation of asset outside of its expected production costs are appropriate (e.g. incidental costs, risks, externalities, or influences of supply and demand)
- Under uncompetitive conditions it is reasonable to mitigate supply offers to price levels that are reasonable reflection of suppliers' cost expectations, with no additional valuation
- When mitigated, suppliers should not be allowed to recover other factors, even if it contributes to their willingness to sell, due to market power concerns

# Proposed Design Principles Cont.

- Under competitive market conditions –
  - Suppliers should be able to offer price at which they are willing to purchase or sell the good based on their asset valuation
  - Competitive forces provide market power protection based on profit-maximizing incentives to submit offers reflecting suppliers' expectation of incremental costs of operating its unit
- Under uncompetitive market conditions –
  - Accepting a supplier's offer price based on how it assesses the units' value could open the markets up to market power
  - Market must protect consumers against exercise of market power or gamine due to insufficient supply
  - Market must ensure offers reflect suppliers' cost expectations

# Issue 1 - Commitment Cost Mitigation May Be Overly Restrictive

- Bid Cap limits offer range (125% conduct test)
- Applying cap under all conditions – competitive or uncompetitive conditions – disregards that under competitive conditions design should allow supply offers based on suppliers' valuation of asset
- This is inappropriate because the competitive market forces exist to provide incentives that limit adverse market impacts from market power

# Issue 1 - Commitment Cost Mitigation May Be Overly Restrictive Cont.

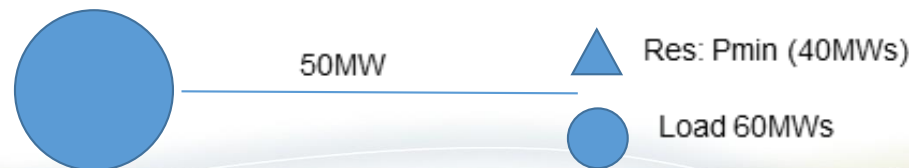
- Stakeholders expressed concerns that the commitment cost mitigation methodology may result in over-mitigation
  - Assumes uncompetitive conditions for every run
  - Conduct threshold lower than other reference level designs
- Initiative will evaluate whether an impact test should test for adverse market impacts by:
  - Identifying constrained versus unconstrained areas
  - Examining changes in energy prices, uplift payments, or both
  - Examining changes as result of committed units, non-committed units, or both
  - Examining changes as result of one unit or portfolio of units



# Issue 1 - Commitment Cost Mitigation May Be Overly Restrictive Cont.

- Potential impact tests for uncompetitive conditions:
  - Pivotal Supplier Test: Evaluates if constraint is competitive or uncompetitive by removing largest suppliers and testing if supply could relieve constraint.
    - If there is sufficient supply to meet demand after removing the largest suppliers → competitive
    - If insufficient supply to meet demand after removing the largest suppliers → uncompetitive and opportunity for market power.
- Concern - unit not mitigated because commitment decision would relieve congestion

*Figure 1: Example of difficulties applying dynamic mitigation to commitment costs*



# Seeking Market Surveillance Committee Insights Cont.

## On Pivotal Supplier Tests

- Would a dynamic assessment performed in tandem with the energy mitigation be preferable?
- Would you support considering a static competitive path assessment for commitment cost mitigation if a dynamic one is not feasible?

# Issue 1 - Commitment Cost Mitigation May Be Overly Restrictive Cont.

- Use structural test to identify constrained areas.
- Apply conduct and impact tests with different conduct thresholds based on type where impact test also fails.
- Conduct and Impact Test: Evaluates if economic withholding could be occurring to warrant mitigation if capable of adverse market impacts.
  - Apply conduct threshold where offers exceeding level are flagged
  - Apply impact threshold where changes in energy prices or uplift exceeding level are flagged
- Concern – allows markup for potential market power within headroom provided by conduct threshold

# Issue 1 - Commitment Cost Mitigation May Be Overly Restrictive Cont.

## Constrained Areas or Local Reliability Issue Dispatches

	Component	Category	Conduct Threshold	Impact Threshold
NYISO	Minimum Load	Constrained	Distribution factor greater than 0 and increase of more than calculated threshold	lower of 200% or \$100/MWh increase of energy prices or uplift payments
MISO	Minimum Load (No-Load plus Energy up to Hourly Economic Minimum)Level	Broad Constrained Area (sufficient compensation expected)	lower of 300% or \$100/MWh increase relative to reference level (except if offer less than \$25/MWh)	lower of 200% or \$100/MWh increase of energy prices or any increase in uplift payments
MISO	Minimum Load (No-Load plus Energy up to Hourly Economic Minimum)Level	Narrow Constrained Area (insufficient compensation expected)	Distribution factor greater than 0 and increase of more than calculated threshold	calculated threshold relative to energy prices or any increase in uplift payments
SPP	No-load	Local Reliability Issue Commitment	10% increase relative to submitted mitigated offer	\$25/MWh increase of energy prices, uplift payments,
MISO	Start-up	Broad Constrained Area (sufficient compensation expected)	200% of reference level	lower of 200% or \$100/MWh increase of energy prices or any increase in uplift payments
MISO	Start-up	Narrow Constrained Area (insufficient compensation expected)	50% of reference level	calculated threshold relative to energy prices or any increase in uplift payments
NYISO	Start-up	Constrained	200% increase relative to reference level	lower of 200% or \$100/MWh increase of energy prices or uplift payments
SPP	Start-up	Local Reliability Issue Commitment	10% increase relative to submitted mitigated offer	\$25/MWh increase of energy prices, uplift payments,

# Issue 1 - Commitment Cost Mitigation May Be Overly Restrictive Cont.

## General Areas – Not a Constrained Area

	Component	Category	Conduct Threshold	Impact Threshold
NYISO	Minimum Load	General	lower of 300% or \$100/MWh increase relative to reference level (except if offer less than \$25/MWh)	lower of 200% or \$100/MWh increase of energy prices
SPP	No-load	General	25% relative to submitted mitigated offer (except if offer less than \$25/MWh)	\$25/MWh increase of energy prices, uplift payments,
NYISO	Start-up	General	200% of reference level	lower of 200% or \$100/MWh increase of energy prices
SPP	Start-up	General	25% relative to submitted mitigated offer (except if offer less than \$25/MWh)	\$25/MWh increase of energy prices, uplift payments,

# Seeking Market Surveillance Committee Insights Cont.

## On Conduct and Impact Tests

- What would be an appropriate threshold that should fail the conduct test to be subject to the impact test?
- How could the California ISO effectively capture impacts of commitments?
- Should the impact test examine impact to energy prices, uplift payments or both?
- How could the California ISO treat portfolio of resources in testing a supplier's market impact
- What analysis should be done to support any design changes?

## Issue 2 - Exceptional Dispatch Mitigation May Not Be Restrictive Enough

- With increased flexibility the ISO will need to re-examine its policies for mitigating exceptional dispatches
- Current policy is if an exceptional dispatch could affect an uncompetitive constraint it is mitigated
- Potential gaps:
  - Whether the natural gas constraint should be considered uncompetitive by design so that exceptional dispatches to address natural gas issues should be mitigated
  - Whether there should be mitigation method for decremental exceptional dispatches

## Issue 3 - Reference Levels Exclude Price Impact of Externalities

- Agreement there needs to be avenue for suppliers to balance obligations to gas and electric systems
- Current policy for reference levels does not allow inclusion of social costs of externalities
- By introducing potential risk of noncompliance charge into the gas market, gas operators introduce externality
  - Externality, monetized by charge, should affect suppliers' view of their gas costs to generate power
  - Ideally, supplier could use its bids to reflect the cost of deviating from a gas instruction that would undermine gas system
  - The markets could co-optimize the cost of dispatch the electric and the gas system constraints



## Issue 4 - Reference Levels May Not Reasonably Reflect Cost Expectations

- Stakeholders expressed that there are several limitations that may result in them not reflecting their cost expectations for a unit
- Limitations could impose a larger price risk on the supplier to potentially incur losses than the supplier would have been willing to assume
- Some stakeholders communicated that they have seen reference levels when mitigated that did not adequately reflect their incremental production costs
  - Overly restrictive commitment cost bid caps
  - Undervalued default energy bids

## Issue 4 - Reference Levels May Not Reasonably Reflect Cost Expectations Cont.

- While the reference level design generally “works well” to not produce overly restrictive bid caps or undervalue default energy bids
- There are several assumptions that have been made to administratively calculate gas-fired units’ costs
  - One Fuel Type per Unit
  - One Procurement Location
  - One Shipper
  - One Price as Proxy
  - Next Day Price as Proxy

# Seeking Market Surveillance Committee Insights

## On bid structure and bidding rule design

- Should ISO re-examine its policy that gas-fired units' costs can be estimated while other technology types cannot?
- Should the California ISO consider moving from a reference level to a bid-in mitigated offer supporting daily submission of mitigated offers?
- Should the California ISO consider enhancing its minimum load to allow hourly variation?
- Should the California ISO consider moving to a “no load” versus a “minimum load” structure?

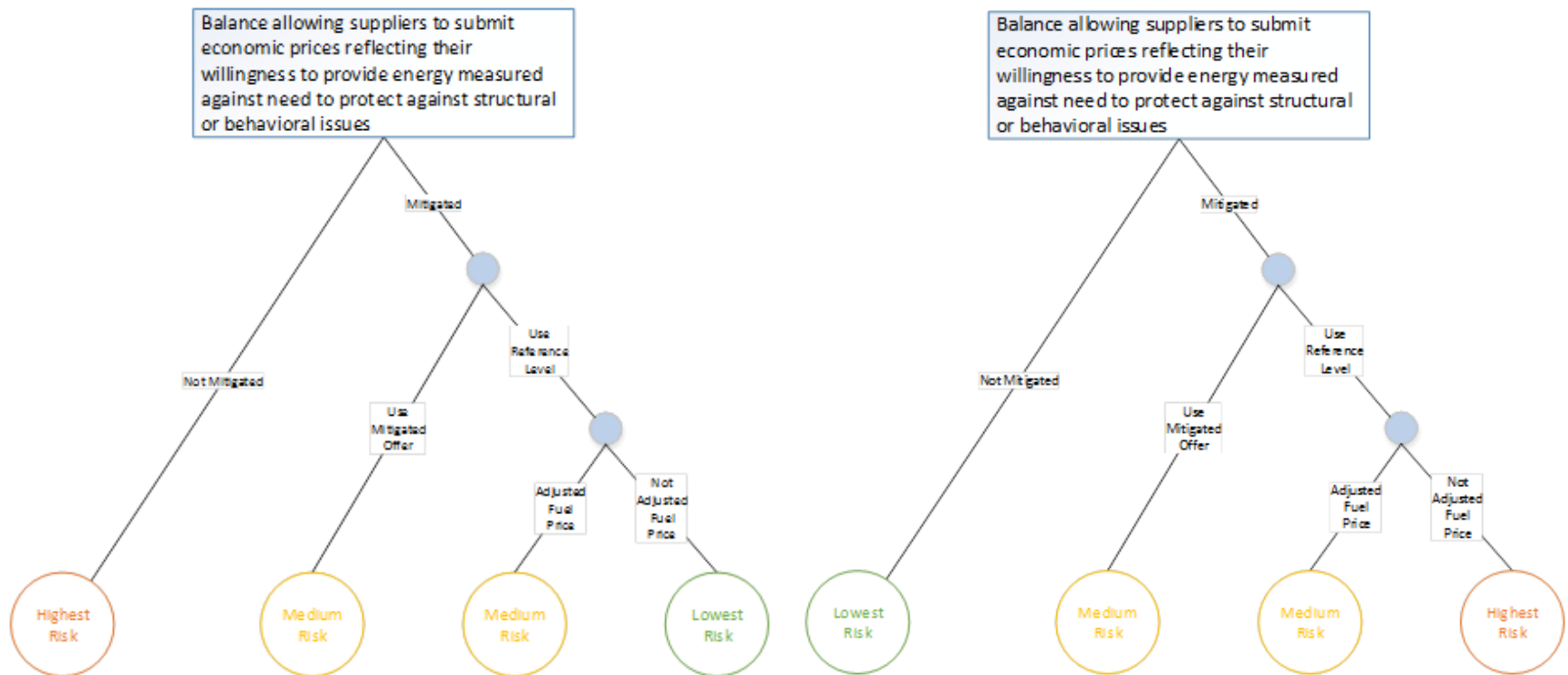
## Seeking Market Surveillance Committee Insights Cont.

On mitigated price designs - What is a reasonable approach to valuing expected production costs?

- How to support calculations with different fuel types?
- How to support calculations where supplier may procure at different locations or transport fuel along different pipeline systems on different days?
- How to include economic incentives introduced by gas markets?
- How to support calculations that capture inter-day and intra-day volatility?

# Seeking Market Surveillance Committee Insights Cont.

What is the preferred design path to find the optimal design balancing suppliers' need to bid assets' value and market's need to protect against market power or gaming concerns?



# Commitment costs and default energy bid enhancements – Evaluating Straw Proposal Scope

		Improve balance of allowing suppliers to submit economic prices for commitment cost offers reflecting their willingness to provide energy measured against need to protect against structural or behavioral issues	
		Yes	No
Increase assurance that mitigated prices are reasonable reflections of suppliers' cost expectations	Yes	Propose Enhancements for Both	Propose Enhancements to Improve Mitigated Prices Reflection of Suppliers' Cost Expectations
	No	Propose Enhancements to Adjust Market Power Mitigation Method for Commitment Cost Offers	Determine No Enhancements Needed

# Q&A