

# MARKET SURVEILLANCE COMMITTEE

## Price Formation: Scarcity Pricing

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# Scarcity Pricing

- The scarcity pricing branch of the pricing enhancements initiative has largely emphasized mechanisms for increasing prices as the market approaches scarcity
  - New reserve products; role of FRU; capacity margin concept
- These mechanism have their merits but add complexity and raise potential implementation issues
  - Outside of the discussion of VOLL, the process has focused less on what the scarcity value should be when there is actual scarcity.
- A more straightforward approach would be to re-examine the penalty values that are applied within the current market design
  - For example, the power balance constraint penalty

# Scarcity Pricing

- The PBC penalty remains at \$1000/MWh, or \$2000/MWh during “831 trigger” conditions
  - CAISO originally proposed raising to \$2000 during all periods but this was eventually rejected in favor of the current conditional increase in the bid cap and price cap.
  - \$1000 PBC penalty price has been in place for decades
    - \$1000 in 2010 ~ \$1500 today
  - Penalty prices have often been linked to bid caps but do not have to be.

# Penalty Value Considerations

- The level of the penalty value has historically been seen as primarily impacting long-run efficiency
  - Impact on investment incentives and “missing money”
- However, there are several considerations that are increasingly relevant and potentially binding for the *operation* of the EDAM/EIM market
  - Stronger incentives for storage resources to retain energy for potentially scarce conditions.
  - Stronger incentives for delivery of scheduled imports.
    - Especially if RT scarcity penalties higher than DAM
  - Allow EDAM to better compete for scarce import MWh in the broader west during tight conditions.
  - Prices of wheeling services would reflect higher scarcity costs
    - Relieve pressure on the priority vs. non-priority distinctions
  - Continuing emergence of demand-side options

# Summary

- There is a strong argument that the introduction of significant new reserve products or functionality should come after some “live” experience with EDAM
- However, that does not mean penalty prices should remain where they are for much longer.
  - Penalty values would have to be coordinated, but CAISO has considered this in the 831 context.
  - Values could be stepped-up over time once a schedule has been agreed upon.