Convergence (Virtual) Bidding

What is it?

- A mechanism that allows market participants to make financial sales (or purchases) for energy in the Day Ahead market, with the explicit requirement to buy back (or sell) that energy in the Real Time market.

  - Possibly profit from the differences between Day Ahead and Real Time prices.
  - Virtual bids pressure DA and RT prices to move closer together.
How is it done?

Example:
Virtual Demand Bid in the DAM

![Diagram showing Virtual Demand Bid in the DAM](image-url)
How is it done?

Example:
Virtual Bids are Liquidated as price takers in the RTM

- Actual RT Price: $55
- Actual DA Price: $34

Graph showing the relationship between price and MW.
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Why?

- FERC’s 9/21/06 MRTU Order: CAISO must implement convergence bidding within 12 months after startup of the LMP-based markets.

Potential Benefits

- Stable prices upon which parties can base contracts -- based on convergence of Day Ahead and Real Time prices.
- Minimizes incentives to underschedule in DA.
- Provides mechanism to hedge generator outages.
Current Status of CB Design

- Stakeholder process to resolve key issues:
  - What market power monitoring measures are needed to prevent gaming with virtual bidding?
  - What credit policy should apply to virtual bidders?
  - What costs should be allocated to virtual bids?
  - What granularity of virtual bidding should the ISO permit?
    - NYISO = zonal
    - PJM & ISO-NE = nodal
    - Strong stakeholder views in California

- Working toward consideration of conceptual design by CAISO Board of Governors in December 2007.

- FERC requires tariff language within 60 days of CB implementation.
CAISO is assessing design capabilities

- Reviewing other ISO practices and experiences
- Developing functional assessment of impacts on ISO software
- Initiating implementation analysis

- CAISO expects to report back to stakeholders in October.
- Comments are welcome anytime: convergencebidding@caiso.com