CAISO Convergence Bidding

DC Energy Input

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Statement of Principles
Convergence Bidding (CB) is an essential component of a multi-settlement LMP market as it increases market efficiency, price transparency, eliminates zonal cross subsidization among load serving entities and drives convergence between the Day-ahead and Real-time markets.

Data comparing zonal and nodal markets in the eastern LMP markets demonstrates how price convergence is significantly better in nodal markets.

Benefits
Reduces risk premium, i.e., the market price to insure against volatility
  — Generally means lower prices for consumers

More efficient dispatch
  — Generally means lower energy prices for consumers

Incent generation to bid more efficiently into the DA market
  — No need to discount chances of receiving a fair price
  — Generally means lower energy prices for consumers
  — Aids in reducing market power
Nodal Pricing and Access

Capturing More Market Benefits Within the CAISO

• Consumer access to nodal markets is an important feature to providing customers with choice, a true day-ahead and less volatile form of the real-time price and potentially lowering the cost of electricity to customers and supporting the overall goal of market efficiency.

• Consumers need incentives to curtail when they are constrained and be rewarded when they are not (e.g., Nodal prices in constrained zones will vary and therefore some will be lower than zonal averages).

• This is a specific example of how load having access to and paying nodal prices creates market efficient solutions. Simply arguing the general principle of market efficiency is less concrete and transparent to regulators and market participants.

• Another motivating factor would be truly competitive retail markets (i.e., why should a competitive retail supplier pay the zonal price if they have customers with preferentially lower (less congested) prices thereby subsidizing others?)
Allowing Virtual Bidding at a Granular Level has a Major Impact on Price Convergence As Evidenced by Comparing NYISO to Others

**Difference Between Nodal and Zonal Price Convergence Among ISOs**

– 5 Quarters, 6/1/05 to 8/31/06 –

**Granular convergence has been much worse in NY than other ISOs in each of the last several quarters, likely because bidding is only allowed at the zonal level in NY**

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1 Convergence metric is the average absolute hourly DA-RT LMP difference, computed over 90-day intervals, normalized by DA prices. In each case, the convergence metric for a zone is compared with the average convergence metric for the generators in that zone.