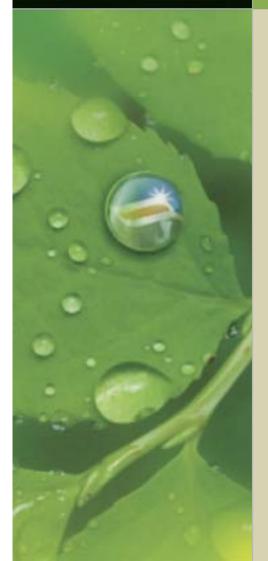


Decision on Convergence Bidding Design



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Convergence bids are financial bids submitted in the day-ahead market to buy or sell energy.

These bids provide:

- Opportunity to arbitrage the difference between day-ahead and real-time prices
- Hedging mechanism for physical generators

Convergence bidding operates successfully in all the other US Independent System Operator markets.



Example 1 - Arbitrage difference in market prices at a location using virtual supply

Day-Ahead Market

- LMP = \$20
- Virtual supply bid clears for 100 MW at \$20
- Settles at 100 MW * \$20 = \$2,000

Real-Time Market

- LMP = \$15
- Virtual supply liquidated in opposite position at \$15
- Settles at 100 MW * \$15 = \$-(1500)

Net Position = \$500 credit



Example 2 – Generator hedges against potential outage and high real-time prices

Day-Ahead Market

- LMP = \$15
- Schedule for 200 MW
- Clears 100 MW Virtual Demand Bid at \$15
- Generator settles 200 MW * \$15 = \$3,000
- Virtual demand settles 100MW * \$15 = \$ -(1500)

Real-Time Market

- LMP = \$ 20
- Produces 100 MW
- Virtual demand bid liquidated in opposite position at \$20
- Generator settles at 100 MW * \$20 = - (2,000)
- Virtual demand settles 100MW * \$20 = \$2,000

Net Position = \$1500 credit



Nodal convergence bidding provides important benefits.

- Lowers costs due to more efficient day-ahead commitment
- Improves grid operations
- Minimizes differences between day-ahead and real-time prices
- Mitigates supplier market power
- Provides suppliers the ability to hedge against generator outages



Management proposes the following design elements for convergence bidding:

- Bidding allowed at pricing nodes, default load aggregation points, interties and trading hubs
- Allocation of certain market costs to convergence bids
 - Uplift costs
 - Grid management charges
 - Transaction fees
- Registration and credit requirements



Proposal includes sufficient safeguards to address concerns raised by nodal convergence bidding.

Concerns	Safeguards
Market manipulation	Position limitsCRR settlement ruleAbility to suspend bidding
Undermining established mitigation measures	Position limitsPhysical LMPM process
Payment default	Dynamic credit check

Obtains objective of mitigating concerns without compromising functionality .



Corollary issues raised in stakeholder process can be addressed through subsequent stakeholder processes

- Requirements to distinguish between physical and financial intertie bids
 - Tagging requirements for interties
 - Determine beneficial information for more efficient market activity
 - Information release policy
- Residual unit commitment market enhancements
- Future enhancements to local market power mitigation



Management requests approval of the proposal.

- Key feature of a locational marginal price market
- Mitigates concerns through safeguards without compromising functionality
- Addresses FERC requirements

Deployment tentatively targeted for February 2011

