Convergence Bidding Design Framework

Farrokh A. Rahimi, Ph.D.

Principal Market Engineer, CAISO

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Background

- **Stakeholder Feedback from Convergence Bidding Tutorial & Panel of June 13, 2006**
  - No objection to the implementation of CB in principle
  - Unanimous agreement on the need for safeguards in CB design
- **Convergence Bidding Design Framework**
  - Work-in-progress draft white paper posted on July 11 and discussed at the July 18-19 Market Initiative Stakeholder Meeting
  - Proposed framework identifies:
    - Several design elements, each with one or more possible options
    - Criteria for selection of recommended option for each design element, with a view to their internal compatibility
  - The collection of the recommended options for different design elements defines the overall CB design

Design Elements and Relevant Options

- **Measures to deter implicit virtual bidding (IVB)**
  - Option 1: None. Count on Explicit Virtual Bidding
  - Option 2: MMIP Protocols
  - Option 3: High penalties for real-time schedule changes with no CB tag
  - Other options?

- **Spatial granularity of virtual bids**
  - Option 1: Zonal (EZ Gen hubs and/or LAPs)
    - Sub-option 1a: LAPs for both virtual supply and virtual demand
    - Sub-option 1b: EZ Gen hubs for both virtual supply and virtual demand
    - Sub-option 1c: EZ Gen Hubs for virtual supply and LAPs for virtual demand
  - Option 2: Nodal
  - Option 3: Other (e.g., sub-LAPs commensurate with tiered CRR nominations or step 3 of the LAP clearing problem mitigation?)

Design Elements and Relevant Options

- **Choice of zonal virtual bid distribution factors**
  - Option 1: Same distribution factors for virtual and actual (physical) schedules in the relevant market (likely different distribution factors in DA and RT)
  - Option 2: Fixed distribution factors for both DA and RT (from distribution factors library)
  - Option 3: Use DA physical distribution factors for both DA and RT virtual bids
  - Other options?

- **Market Power Mitigation Measures**
  - Option 1: No mitigation for virtual bids
  - Option 2: Limit number of virtual bids per SC and number of bid segments per virtual bid
  - Other Issues:
    - Any changes needed in pre-IFM (MPM RRD)?
    - How to treat virtual bids if pre-IFM is based on bid-in demand?

Design Elements and Relevant Options

- **Pricing and Unit Commitment**
  - Option 1: Maintain current restriction on the pool of units for IFM as determined in pre-IFM
  - Option 2: Lift restriction on the pool of resources for IFM

- **Bid price-quantity provisions**
  - Option 1: Allow only priced virtual bids (no price taker VB)
  - Option 2: Allow both price taker and priced virtual bids
  - Option 3: (If both zonal and nodal VB allowed) allow only priced virtual bids for zonal VB, but only price taker virtual bids for nodal VB.
  - Other options?

Design Elements and Relevant Options

- **Credit and Collateral**
  - Collateral requirements
    - Option 1: Constrain VB participation based on credit posting (VB quantity times proxy clearing price)
    - Option 2: Revise SC credit requirements based on the introduction of CB in CAISO markets
    - Option 3: Constrain VB participation initially; then move to a more conventional credit policy
  - Proxy clearing price for collateral computations
    - Option 1: Reference clearing price based on some percentile (97%?; 50%; other) of the highest actual price during the previous 90 days (or a different period?).
    - Option 2: Other?

Design Elements and Relevant Options

- **Cost Allocation**
  - IFM and RUC Unit Commitment cost allocation
    - Option 1: Exempt virtual bids from unit commitment cost allocations
    - Option 2:
      - Include DA virtual demand bids (along with actual demand) as billing determinants for DA Unit Commitment uplift cost allocation
      - Include DA virtual supply bids (along with under scheduled demand) as billing determinant for RUC cost allocation
  - Ancillary Service cost allocation
    - Option 1:Exempt VB from A/S cost allocation
    - Option 2: Exempt VB from Tier 1 A/S cost allocation (based on User Rate), but not from A/S neutrality cost allocation (including both virtual supply and virtual demand)

Evaluation Criteria for Design Options

- **Consistency with previously approved policies and design elements**

- **Level of functionality (responsiveness to market needs)**

- **Simplicity and ease of implementation**
  - CAISO
  - Market Participants

- **Market efficiency impact**

- **Market power mitigation and gaming concerns**

- **Other?**

Requested MSC Input

- **Is the proposed CB design framework sound?**

- **Are the identified design elements correct and complete?**
  - What other design elements should be added?
  - Should any of the stated elements be dropped or modified?

- **Are the identified options for each design element the right ones?**
  - What other options should be added?
  - Should any of the options be dropped or modified?

- **Are the identified evaluation criteria correct and complete?**
  - What other criteria should be added?
  - Should any of the stated criteria be dropped or modified?

MSC Recommendations

- **To be completed based on MSC Input**