California ISO
Your Link to Power

California Independent
System Operator Corporation

Elements of Convergence Bidding Design: Credit and Cost Allocation Issues

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Market Initiatives Stakeholder Meeting

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Developing the Convergence Bidding Design

- **8/14 Revised Design Work Paper – identifying nine design elements**
- **9/6 and 9/8 Conference calls with other ISOs**
- **10/30 Conference call on core design elements:**
  - Explicit Bidding
  - Zonal Virtual Bidding
  - Same Distribution Factors for virtual and physical bids.
  - Market Power Mitigation Measures
- **11/29 Stakeholder Discussion**
  - Credit and Collateral
  - Cost Allocation

Credit and Collateral: General Observations

- No standard FERC policy for ISOs.
- Eastern ISOs initially imposed tough collateral requirements, then relaxed with more experience.
- Trade-off between transaction costs discouraging VB versus the need for protection from potential payment defaults.
- Possible linkage of credit requirements to the position limits of firms.

Special Credit Requirements for VB

- **Eastern ISOs initiated virtual bidding with special collateral requirements for virtual bidders – but have relaxed those requirements over time.**
  - Initial need to gain experience with new virtual market.

NYISO Credit Requirement = MWHs daily trading limit
x (exposure period)
x (percentile value of the price delta between DAM and RT over previous 90 days)

- Exposure period – 14 days? 7 days? 4 days? 2 days?
- Percentile value – 97%? 50%?
- Price difference within zones or across zones?

Cost Allocation for Virtual Bids

- **IFM and RUC Unit Commitment**
  - virtual demand increases unit commitment in the IFM and decreases commitment in RUC,
  - Virtual supply decreases unit commitment in the IFM and increases commitment in RUC.

- **Ancillary Services under MRTU**
  - **Procurement of A/S based on CAISO forecasted demand**
  - **A/S costs are allocated to two Tiers**
    - Tier 1: Each SC's obligation as determined by Metered Load, minus its self-provided A/S.
    - Tier 2: additional payments or credits to ensure revenue neutrality.

Options for Cost Allocation

- **IFM and RUC Unit Commitment cost allocation**
  - Option 1: Exempt virtual bids from unit commitment cost allocations
  - **<u>Option 2:</u>** Symmetrical treatment
    - 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 all A/S cost allocation
  - **<u>Option 2:</u>** 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)