CRR Enhancements

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Jim McClain, Sr. Market Design Specialist,
and Tom Cuccia, Sr. Stakeholder Engagement & Policy Specialist

CRR Enhancements Conference Call
Dec. 18, 2009
Meeting Objective: Present Draft Final Proposals To Address Refinements to CRR Process

Non-Credit Policy Issues

- Process for adjusting CRR holdings to reflect load migration
- Method for handling trading hubs in the CRR release
- Weighted least squares objective function
- Elimination of multi-point CRRs
- Refinement of tiers in monthly CRR allocation

Non-Credit Business Process Issues

- Sale of CRRs in the CRR auction
- Modeling to reinforce CRR revenue adequacy through transmission outage consideration (future)
- Tracking of long-term CRRs in the CRR system (process refinement)
- Process for “signature data” in PNP (process refinement)
CAISO Stakeholder Process – CRR Enhancements – Non-Credit Issues

Opportunities for Stakeholder Input

1. Issue ID Paper
2. Straw Proposal
3. Final Draft Proposal

Board of Governors: Early 2010

FERC

Implementation

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<td>Publish Issue Paper</td>
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## Today’s Agenda

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<td>Intro &amp; Objective</td>
<td>Tom Cuccia</td>
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<td>1:10 – 1:35</td>
<td>Load migration process, Treatment of trading hubs, Weighted least squares objective function</td>
<td>Jim Price</td>
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<td>1:35 – 1:50</td>
<td>Multi-point CRRs, Tiers in monthly allocation, Sale of CRRs in the CRR auctions, “Signature data”</td>
<td>Jim McClain</td>
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<td>1:50 – 2:00</td>
<td>Questions, Next Steps</td>
<td>Jim Price &amp; Tom Cuccia</td>
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<td>- Comments due 12/30/09 to <a href="mailto:jprice@caiso.com">jprice@caiso.com</a></td>
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**Topic:** Revise Load Migration Process

- **Issue:** Current process for transferring CRRs due to load migration between Load Serving Entities (LSEs) requires the ISO to handle data on retail customers.
  - Not otherwise the type of data for which the ISO is responsible for handling and processing.
  - Data confidential to entities who are not direct ISO market participants.
- **Objective:** Revise process to avoid ISO handling of confidential retail end-use customer data.
  - Align data management with wholesale vs. retail market function
- **Concerns in previous comments:** roles/responsibilities, dispute resolution, quality control, independence
Proposal Ensures Concerns Are Addressed

- Existing process consists of discrete steps:
  - Before accounting for load transfers between LSEs, UDCs calculate average demand per customer, by customer class. Then:
    1. UDCs send customer-specific load migration data to ISO. Using these data, the ISO (a) counts the customers per customer class that transferred between LSEs, then (b) calculates the net load migration between each pair of LSEs by multiplying the number of customers by the average demand, which was provided by UDCs.
    2. The ISO converts net migration from MW to percentages of LSE’s total demand, and calculates the appropriate transfers of CRRs between LSEs.

- Proposal does not change the fundamental process, adds dispute resolution
Proposal Aligns Data Management with ISO and UDC Roles in Market

- Proposal divides Step 1 to align with UDC vs. ISO roles:
  a) As retail distribution companies, UDCs will count the retail customers per customer class that transferred between LSEs, and send the count of customers to ISO.
  b) Using these data, the ISO will then calculate the net wholesale-level load migration between each pair of LSEs (i.e., the wholesale market participants) by multiplying the number of customers by the average demand, which was provided by UDCs.

- Step 2 is unchanged. The ISO converts net migration from MW to percentages of LSE’s total demand, and calculates the appropriate transfers of CRRs between LSEs.
Key Issue Remained After Straw Proposal: Dispute Resolution

- Comments requested dispute procedure. ISO proposes:
  1. Retain schedule for data from UDCs (approx. 20th of month).
  2. LSEs to receive same data sent to ISO, on same date.
  3. Retain schedule for ISO’s calculated CRR transfer (approx. 22nd of month) & LSEs informing ISO of disagreements (approx. 24th).
  4. In event of disagreement, LSE contacts UDC and ISO between 20th and 24th. LSE and UDC submit dispute to ISO if unable to resolve. ISO may request underlying customer data and explanations of disputed data. ISO will recalculate transfers as needed, then purge retail customer data.
  5. In event of unresolved dispute, LSE or UDC may pursue further review through ISO Tariff section 13.

- Goal is correct data. All parties have responsibility to get correct data.
Proposal Ensures Consistency of Business Processes

- ISO will ensure consistency of business processes as roles of ISO and UDCs change.
  - Consistency includes documentation in CRR BPM.
  - UDC reporting of number of customers ensures consistency with UDCs’ calculation of average demand for customer classes.
  - Implementation phase will develop details including data templates and timing of implementation.
  - ISO assisted UDCs in existing process, including prototype computer software, and will continue to assist as needed.
  - ISO is forming working group to further review business process.

- Solution addresses both ISO and stakeholder concerns.
  - Proposal is between extremes of ISO receiving confidential retail data and UDCs independently processing migration data.
**Topic: Revise Modeling and Treatment of Trading Hubs in CRR Allocation**

- **Issue:** Current CRR allocation process results in holdings of many small CRRs, due to disaggregation of a nominated Trading Hub CRR into separate CRRs for each constituent PNode of the Trading Hub.

- **Objective:** Streamline allocation process by revising approach for allocating and tracking CRRs having a Trading Hub source or sink.

- ISO’s proposes to facilitate implementation by retaining existing SFT and adding post-processing.
  - Details were discussed in 11/16/09 conference call.
Straw Proposal Adapted Stakeholder Comment on Issue Paper.

- Description from Straw Proposal:
  
  1. Disaggregate Trading Hub nominations to constituent PNodes.
  2. Conduct Simultaneous Feasibility Test (SFT) to award constituent PNodes using current methodology, and award rebundled Trading Hub CRR as percentage of nomination.
  3. CRR awards also include counterflow CRRs to relieve any binding constraints, as the difference between SFT results and the PNodes’ shares of awarded Trading Hub CRRs.
  4. Eligibility for subsequent tiers is reduced by Hub Nomination less the counterflow CRRs.

- Trading Hub CRRs eligible for renewal in Priority Nomination Process (PNP). (Counterflow CRRs not renewable)
Comments on Straw Proposal Included Questions on Renewal of Trading Hub CRRs.

- Requirement for renewal of counterflow CRR?
  - PNP processing does not currently tie renewal of one CRR to renewal of another CRR – would be complex validation

- Counterflow CRRs needed to preserve feasibility of Trading Hub (TH) CRRs? What rules apply?
  - Nomination to renew TH CRR goes through same 4-step process in PNP as any other tier in CRR allocation.
  - PNP uses new network model (including allocation factors), only awards TH CRR to extent sink remains unconstrained, and awards new counterflow CRRs as needed to make TH CRR feasible for the new year’s conditions.
  - TH CRR has no priority over other nominations in PNP.

- ISO believes these details resolve stakeholder concerns
**Topic:** Implement Weighted Least Squares Objective Function

- **Issue:** Current CRR allocation software does not equitably distribute the reduction from CRR allocation requests among participants. Software now uses most effective nominated CRR to mitigate congestion in the simultaneous feasibility test, to maximize CRR release.

- **Objective:** Balance equity with maximum CRR release.

- **Proposal** has stakeholder support & appears feasible:
  - Implement weighted least squares (WLS) CRR optimization algorithm to balance equity with maximum CRR release
  - ISO continues to consider Auction Revenue Rights. Stakeholder processes (not WLS implementation) will determine timing.
General support received for the following topics

- Based on comments received the following topics had overall general support so the ISO proposes to implement as highlighted below:
  - The multi-point function will be removed which will simplify implementation and lower costs of new features.
  - In conjunction with the above, the monthly process will retain both tiers and modifications will be made as follows:
    - Allow sub-LAPs for monthly tier 1 \((\text{Also for annual tier 2? Comments?})\)
    - Allow LSEs to request up to 100% of monthly eligibility in tier 1
  - Sell feature will be implemented in the auction process
  - Postponement of revenue adequacy discussion
  - Implement administrative solution for tracking long term CRRs
  - Work on developing Tariff language on PNP signature data
Straw Proposal and Stakeholder Comments
Identified Issues to Queue for Future Discussion

- **Credit Issues:**
  - Process for re-selling CRRs of defaulting CRR holder (ISO)
  - Single collateral pool for all seasons in annual auction (DC Energy)
    - Occurring as business process refinement in credit systems
  - Netting allocated & auctioned CRRs in holding credit reqt. (SVP)

- **Non-Credit Issues:**
  - Modeling approaches for CRR revenue adequacy (ISO)
  - Extension of 30-day outage reporting period to facilitate monthly CRR process (PG&E)

- **Auction Enhancements:**
  - Market Initiatives Roadmap: Auction Revenue Rights, long term (LT) CRR auction, flexible LT CRR term length, multi-period optimization in LT CRR auction (ISO)
  - “Balance of planning period” auction (DC Energy)