

CRA Review of Forward Capacity Market Design



INTERNATIONAL

**FCM Working Group Meeting
August 7, 2009**

Primary Areas with Deficiencies

- **Price setting when “Out of Market” resources affect market clearing**
- **Modeling of capacity zones**
- **Pricing mechanics, including collars and CONE**
- **Role and obligations of Demand Resources**

Topic 1

Alternative Price Rule and Out-of-Market Capacity

APR / OOM

First Proposal by INTMMU

1. **“The triggering conditions should be modified to properly account for multiyear effects of OOM resources that clear in a single year and eliminate need for new entry in subsequent years.”**
 - **Agreed.**
 - Capacity Carry-Forward Rule has this effect in load pockets (MR1 III.13.2.7.9)
 - Recognizes that net new requirements may be small and met by overhang of OOM resources in previous years
 - Eliminates incentive to perpetuate over-build ahead of need to suppress prices

APR / OOM

Second Proposal by INTMMU

2. **“the adjusted price should apply only to existing capacity, not to OOM new capacity,” in order to “encourage potential self-supply and bilateral contract-based entrants to offer closer to their true costs, with entry contingent on clearing in the auction.”**
- **Disagree**
 - Would treat many new resources as “pay as bid”
 - Long lead-time resources rationally bid below full cost, since many costs are already sunk at FCA
 - Could discourage rational, competitive bilateral contracting between LSEs and suppliers

APR / OOM

Third Proposal by INTMMU

3. the APR price adjustment no longer needs to be capped by the CONE, since competitive offers by new entrants should provide a competitive cap.
 - **Agreed, with qualification**
 - If competitive offers of market-based new entrants, they should set the clearing price; better estimate of current market than CONE
 - BUT if insufficient competition, some cap should remain
 - Compare with $1.1 \times$ CONE cap in FCA for Insufficient Competition

APR / OOM

Fourth Proposal by INTMMU

4. It is appropriate to monitor the effectiveness of the APR over time and to identify ways to improve monitoring, mitigation, and incentive mechanisms.
- **Agreed**

APR / OOM

Fifth Proposal by INTMMU

5. **Instead of a price collar that is in effect for all auctions, the INTMMU supports additional changes to the APR to offer some price certainty to existing resources when the price is artificially depressed by the OOM resources.**
 - **Tentatively Agreed, but details require work**
 - Persistent price floor may prevent efficient exit
 - APR-triggered floor would discourage subsidized entry that forces premature retirements and/or drives out DR
 - Parallel in NYISO NYC mitigation rules, with offer floor imposed throughout expected period of surplus

APR / OOM

Additional Recommendations

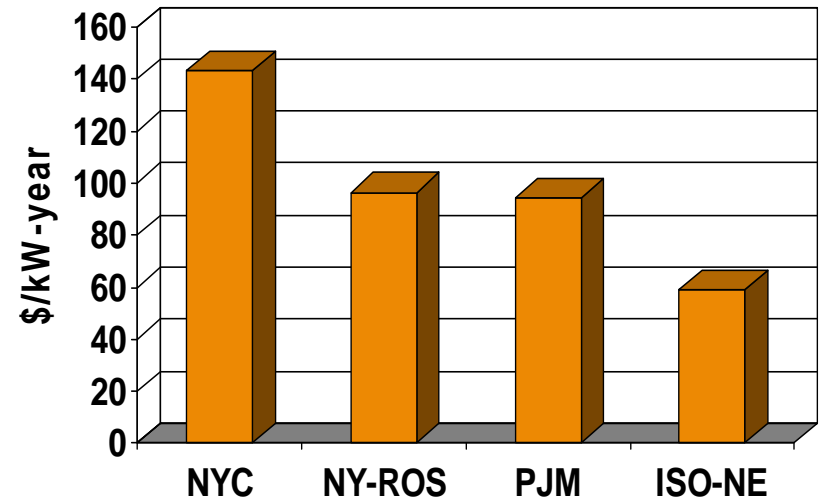
- **Revise definition of OOM to flag all resources offered well below true economic cost**
 - Current definition only applied to 40 MW in FCA #1
 - But FCA #1 also included (as market bids):
 - 1,495 MW of new capacity treated as existing, including 585 MW of gen
 - 330 MW of denied Dynamic De-List Bids
 - Unknown quantity of DR bids benefitting from SBC or other support
 - *These resources should be identified as part of any widened “capacity carry-forward” rule, as well as going forward.*

APR / OOM

Additional Recommendations

- **Revise CONE to reflect current cost of new generation**
 - OOM definition relies on test at $0.75 \times \text{CONE}$
 - Current CONE estimate is unlinked from market conditions
 - Unchanged, allows APR to be bypassed with bids at 46% of NY CONE level
 - CONE based on generation, not DR, uprates, etc.

Current (Net) CONE Values



Note: ISO-NE value does not include expected PER cost

Topic 2

Zonal Definition and Price Separation

Zones

First Proposal by INTMMU

1. ...the reliability criterion used in determining the FCM zones [should] be the same as the zonal reliability criteria the ISO uses to review De-List Bids in the auction
 - **Agreed**
 - Need to avoid the “Norwalk Harbor” problem of FCA #1
 - Without uniform standards at all stages of FCM, resulting prices cannot communicate the quantity of resources required in particular locations

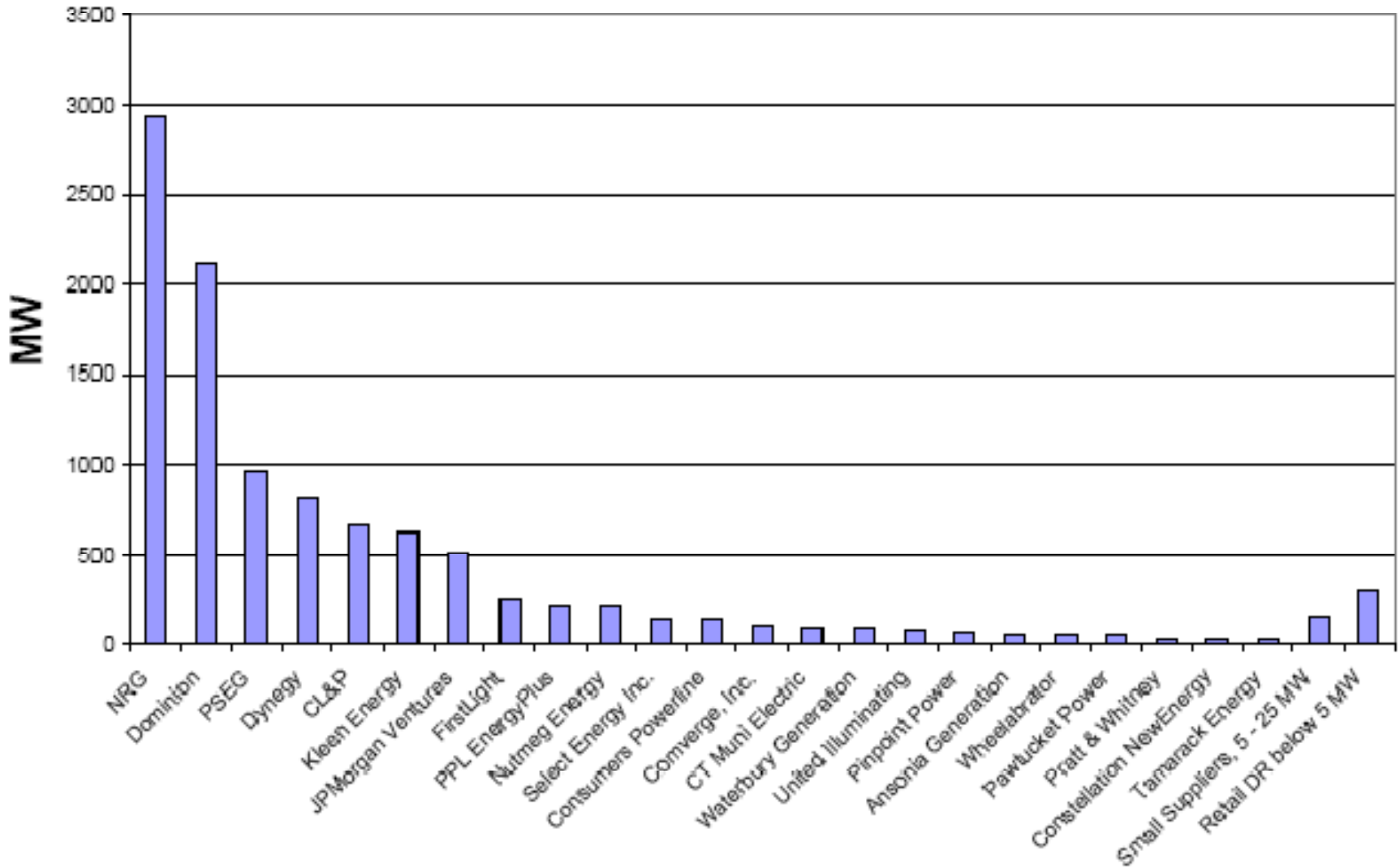
Zones

Load Pockets Had Ample Competition in FCA #2

- **Connecticut**

- 6,817 MW LSR
- 10,777 MW qualified, including 1,166 MW of DR (366 MW new DR)
- 9,159 MW cleared
- 3,960 MW surplus
- 2,940 MW from largest supplier (NRG)
 - Of which 1,066 MW was *new* (374 MW OOM)
- *NO Pivotal Supplier*
- *ONE Supplier > 20% share*
 - *NRG had 20.5% share excluding new generation*
- *53% of qualified capacity from suppliers with <10% market share*

Figure 1: Distribution of Qualified Connecticut Capacity among Lead Participants, FCA #2



Zones

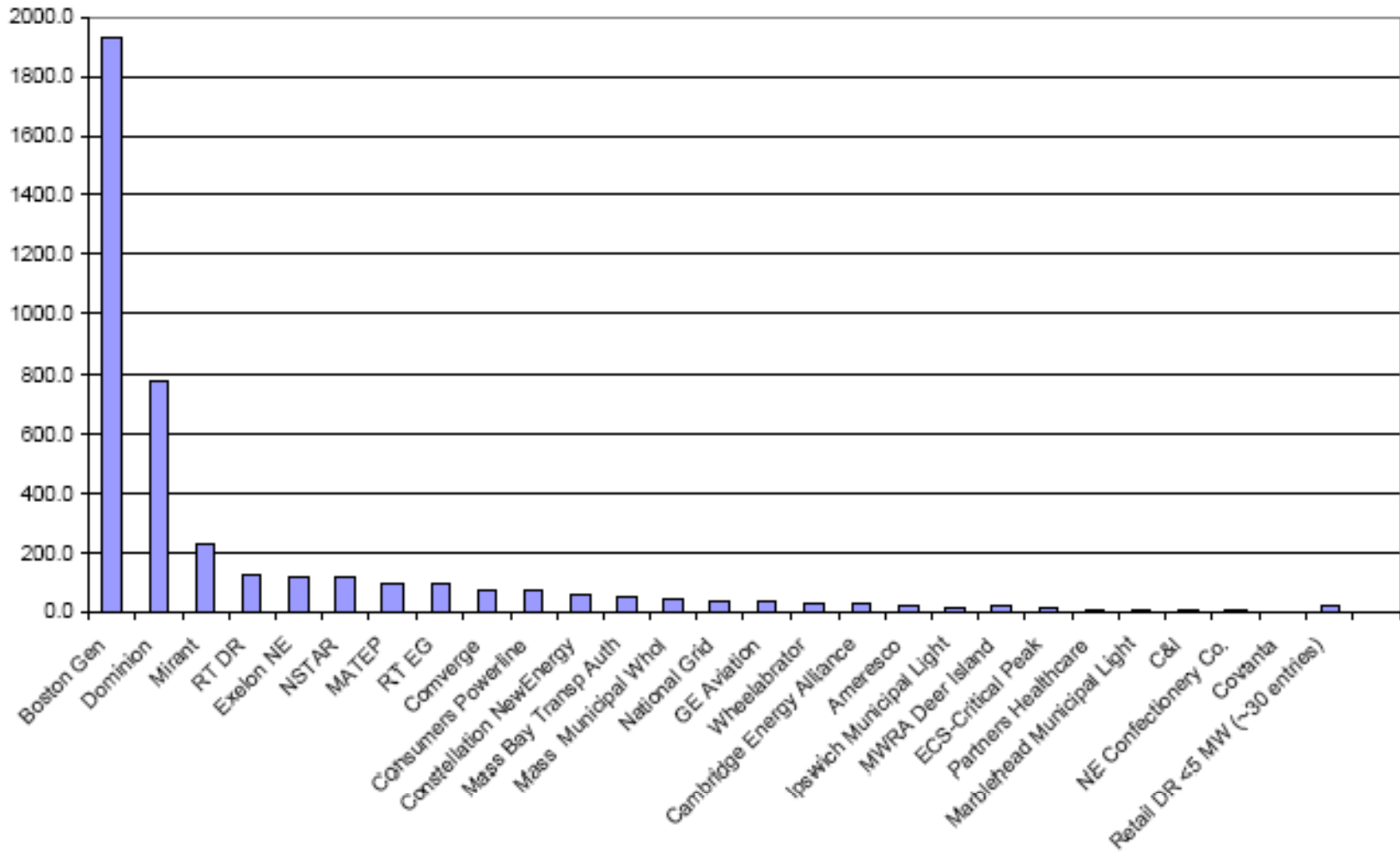
Load Pockets Had Ample Competition in FCA #2

- **NEMA / Boston**

- 2,016 MW LSR
- 4,019 MW qualified, including 717 MW of DR (349 MW new DR)
- 3,892 MW cleared
- 2,003 MW surplus
- 1,934 MW from largest supplier (Boston Gen)
- *NO Pivotal Supplier*
- *ONE Supplier > 20% share*
 - *Boston Gen held 48% share*
- *32% of qualified capacity from suppliers with <10% market share*

Figure 2: Distribution of Qualified NEMA-Boston Capacity among Lead Participants, FCA #2

NEMA Qualified Capacity by Lead Participant (Summer 2011, FCA #2)



Zones

Second Proposal by INTMMU

2. Allow permanent delist bids to affect the creation and pricing of a zone during the FCA to improve zonal price formation
 - **Agree, but other delist bids should also be allowed to create and price zones**
 - Locational pricing is core element of FCM
 - All Static De-List bids are subject to INTMMU review and filed with FERC; cost-based bids should be allowed to set price
 - Structural competition, even in load pockets, is high
 - Three-year-forward design makes all locations contestable
 - Even existing resources are owned very diversely
 - Dynamic De-List bids from suppliers without market power should be eligible to set market prices

Other Topics

Demand Response, CONE, and Other Topics



CONE Reset

- **Flaws in current design:**

- Update rule allowed updates when no new, market-based entry occurred
- Update rule modifies CONE without new information about generation costs
- Current level of CONE is unrealistic

CONE Reset

- **CONE serves many purposes:**
 - Auction starting price
 - Transitional price collar is set at $0.6 \times \text{CONE}$ and the cap at $1.4 \times \text{CONE}$.
 - If the Insufficient Competition rule is triggered, existing capacity resources are paid the lower of the Capacity Clearing Price or $1.1 \times \text{CONE}$.
 - Under inadequate supply, existing supply is paid at $1.1 \times \text{CONE}$.
 - Thresholds for triggering Market Monitor review of bids are tied to CONE: delist or export bids $> 0.8 \times \text{CONE}$ are reviewed as are new capacity or import bids $< 0.75 \times \text{CONE}$.
 - Permanent De-List Bids below 1.25 times CONE shall be eligible to set the price in the FCA.
 - CONE Sets the level of Financial Assurance new suppliers must demonstrate.
 - CONE affects price thresholds for purchasing capacity to replace Permanent and Export De-List Bids ($1.25, 1.5 \times \text{CONE}$).
 - Price set by the APR, when triggered, is capped at CONE.
 - CONE is used for the Quantity Rule and in the reconfiguration auctions.

Obligations on Demand Resources

- **DR has lower performance obligations than generation or imports**
 - Voluntary energy market participation
 - Performance only in Shortage Events
 - Availability only in OP4 events (and even then, with only financial penalties, not a strict must-offer)
- **Differences should either be:**
 - Eliminated, requiring comparable performance from all capacity resources
 - Monetized, creating two tiers of capacity resources

Other Issues not Addressed by INTMMU Review

- Option to delist resources on a multi-year basis
- Allow replacement of import capacity with other comparable external resources
- Relax mitigation applicable to delisted capacity that voluntarily offers into the real-time energy market,
- Explicitly ensure that permanently delisted resources can retire immediately once all capacity obligations have been satisfied
- Exempting resources that clear at the Rest-of-Pool clearing price from obligations of local resources
- Review of the PER calculation to ensure that it satisfies its intended purpose.

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