

ICAP Spot Market Auction

Enhancements to Bidding Requirement

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Agenda

- ◆ Background
- ◆ Current bidding requirement for the ICAP Spot Market Auction
- ◆ Proposed bidding requirement for the ICAP Spot Market Auction
- ◆ Next Steps

Background

- ◆ The NYISO periodically reviews its credit policy to ensure credit requirements match the risk associated with the markets.
- ◆ The current credit requirement for bidding in the ICAP Spot Market Auction is based on maximum potential exposure and utilizes the UCAP Based Reference Price.
- ◆ Market Participants have asked the NYISO to revisit this methodology based on recent Spot Market Auction trends/activity.
- ◆ No changes are being proposed to credit requirements for the Strip and Monthly ICAP auctions.

Current ICAP Spot Market Bidding Requirement

ICAP Spot Market Exposure: Current Bidding Requirement

- ◆ Section 26.4.3 of the Market Services Tariff states:
 - *The Bidding Requirement shall be an amount equal to....:*
 - (iv) five (5) days prior to any ICAP Spot Market Auction, the maximum amount that the Customer may be required to pay for UCAP in the auction

- ◆ Credit support for the bidding requirement is typically held for less than one week.

ICAP Spot Market Exposure: Current Bidding Requirement

- ◆ The current bidding requirement is calculated using the following formula:
 - *The sum of all locations where the bidding requirement for each location is calculated as follows:*
 - UCAP Based Reference Price (in kW) * 1,000 * Deficient MWs
plus
 - $\frac{1}{2}$ UCAP Based Reference Price (in kW) * 1,000 * $\frac{1}{2}$ Spot Percent * Requirement MWs

Where Spot Percent currently equals 18% for Zones J and K and 12% for NYCA

ICAP Spot Market Exposure: Current Bidding Requirement

- ◆ The following example summarizes the current bidding requirement for the ICAP Spot Market Auction:

Summary for one Market Participant buying 1 MW in each location (NYC, LI, NYCA)

| | May 2006 - Oct 2011 | May 2007 - Oct 2011 | May 2007 - April 2010 | May 2010 - Oct 2011 |
|-------------------------------|------------------------|------------------------|--------------------------|------------------------|
| Collateral Held | \$2,367,123 | \$1,932,031 | \$1,247,958 | \$684,074 |
| Uncovered Payments | \$0 | \$0 | \$0 | \$0 |
| % Uncovered | 0.0% | 0.0% | 0.0% | 0.0% |
| Excess Collateral Held | \$1,551,583 | \$1,322,251 | \$819,228 | \$503,024 |

- ◆ While the current rule has historically resulted in no exposure to the market for Market Participant non-payment, there is a potential to reduce the collateral held without significantly increasing exposure.

Proposed ICAP Spot Market Bidding Requirement

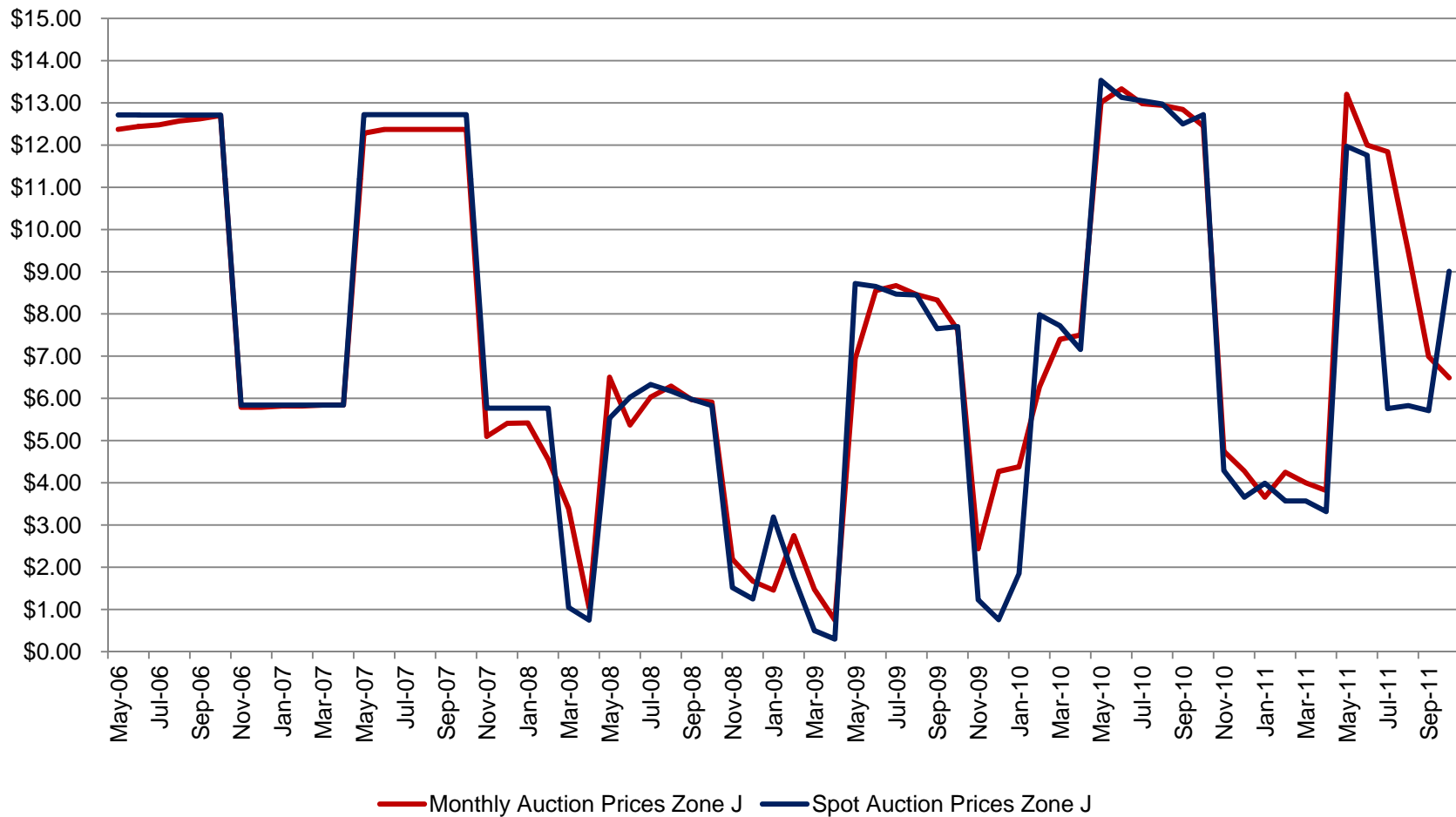
ICAP Spot Market Exposure: Proposed Bidding Requirement

- ◆ The NYISO considered the following factors when analyzing potential bidding requirement methodologies for the ICAP Spot Market Auction:
 - *Market risk associated with the ICAP Spot Market.*
 - *The overall uncovered exposure.*
 - *Trends on collateral held under the current rule.*

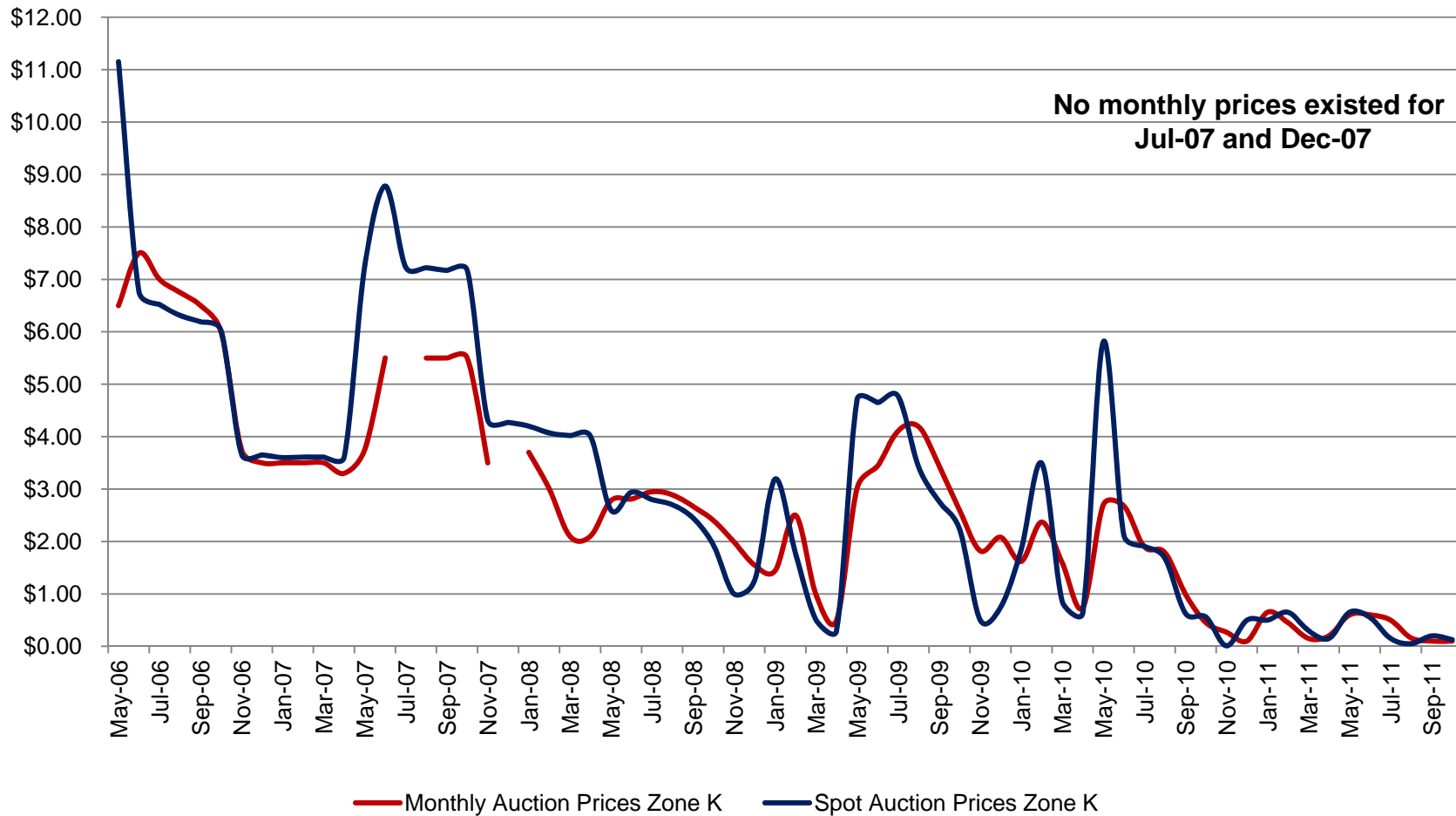
ICAP Spot Market Exposure: Analysis

- ◆ The tariff states that the bidding requirement is equal to the maximum amount the Customer may be required to pay for UCAP in the auction.
 - *The NYISO utilizes the UCAP Based Reference Price to determine maximum exposure.*
- ◆ The NYISO analyzed the use of the most recent monthly auction price as an option to right-size the bidding requirement.
- ◆ The following three slides compare the monthly auction price to the spot market auction price by location.
 - *The analysis of historical data shows a positive correlation between the monthly auction price and the spot auction price.*

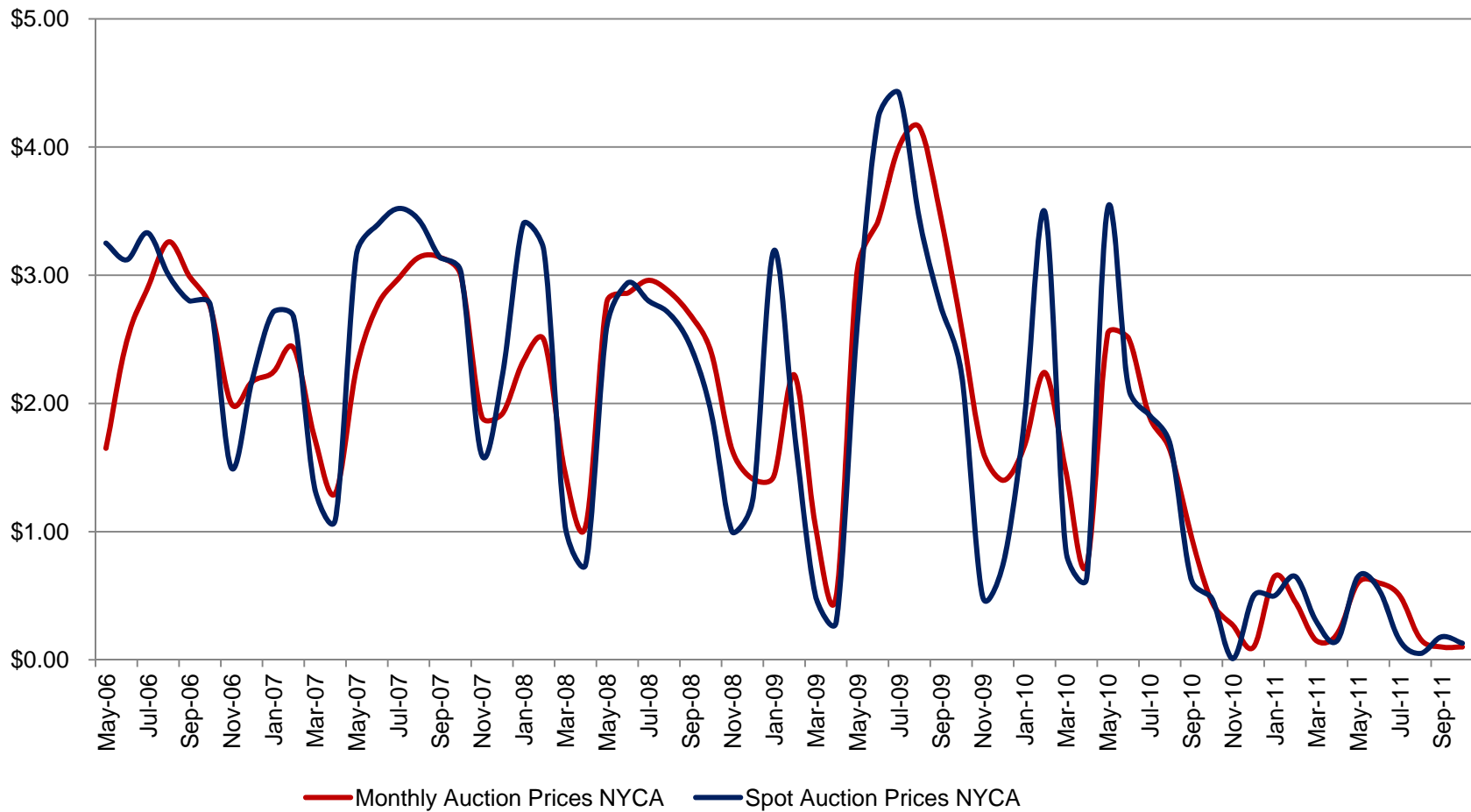
Monthly Price vs. Spot Price: Zone J



Monthly Price vs. Spot Price: Zone K



Monthly Price vs. Spot Price: NYCA



ICAP Spot Market Exposure: Analysis

- ◆ The NYISO determined that a margin added to the monthly auction price would be needed in order to cover the price variability between the two auctions (Monthly and Spot).
- ◆ Using historical data since May 2006, an analysis was performed to examine the effectiveness of adding a margin, by location, to the monthly auction price.

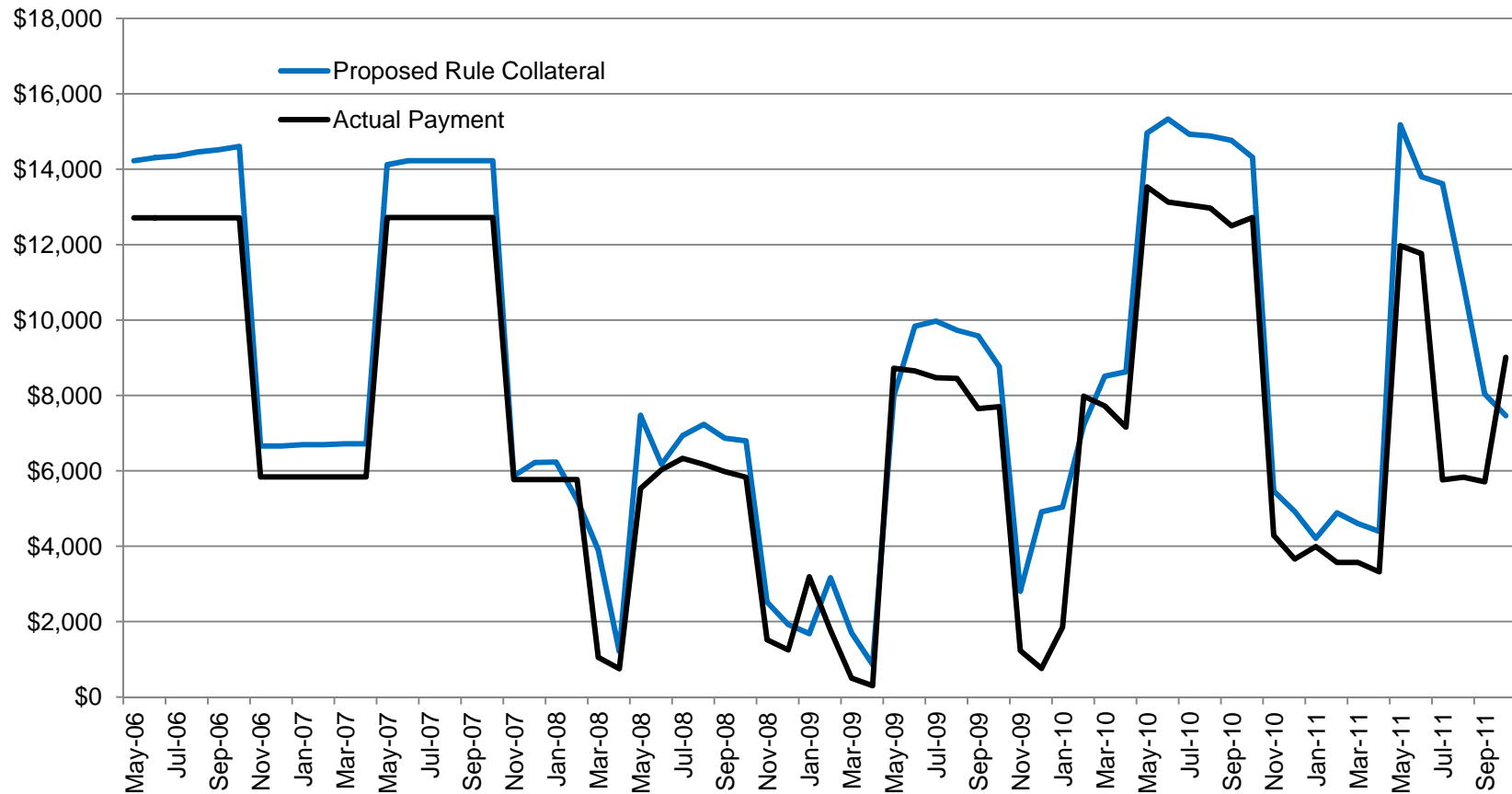
ICAP Spot Market Exposure: Analysis – Zone J Margin

- ◆ Adding a margin of 15% to the monthly auction price in Zone J identified the following:
 - *Overall uncovered exposure would have approximated 1% from May 2006 through October 2011.*
 - *Collateral requirements would have been reduced by approximately 45% during the same time period.*

Breakdown for one Market Participant buying 1 MW in Zone J

| | May 2006 - Oct 2011 | May 2007 - Oct 2011 | May 2007 - April 2010 | May 2010 - Oct 2011 |
|-------------------------------|------------------------|------------------------|--------------------------|------------------------|
| Collateral Held | \$573,459 | \$446,867 | \$260,188 | \$186,680 |
| Uncovered Payments | \$5,104 | \$5,104 | \$3,557 | \$1,547 |
| % Uncovered | 1.1% | 1.4% | 1.6% | 1.0% |
| Excess Collateral Held | \$94,983 | \$79,691 | \$41,805 | \$37,886 |

ICAP Spot Market Exposure: Analysis - Zone J Margin



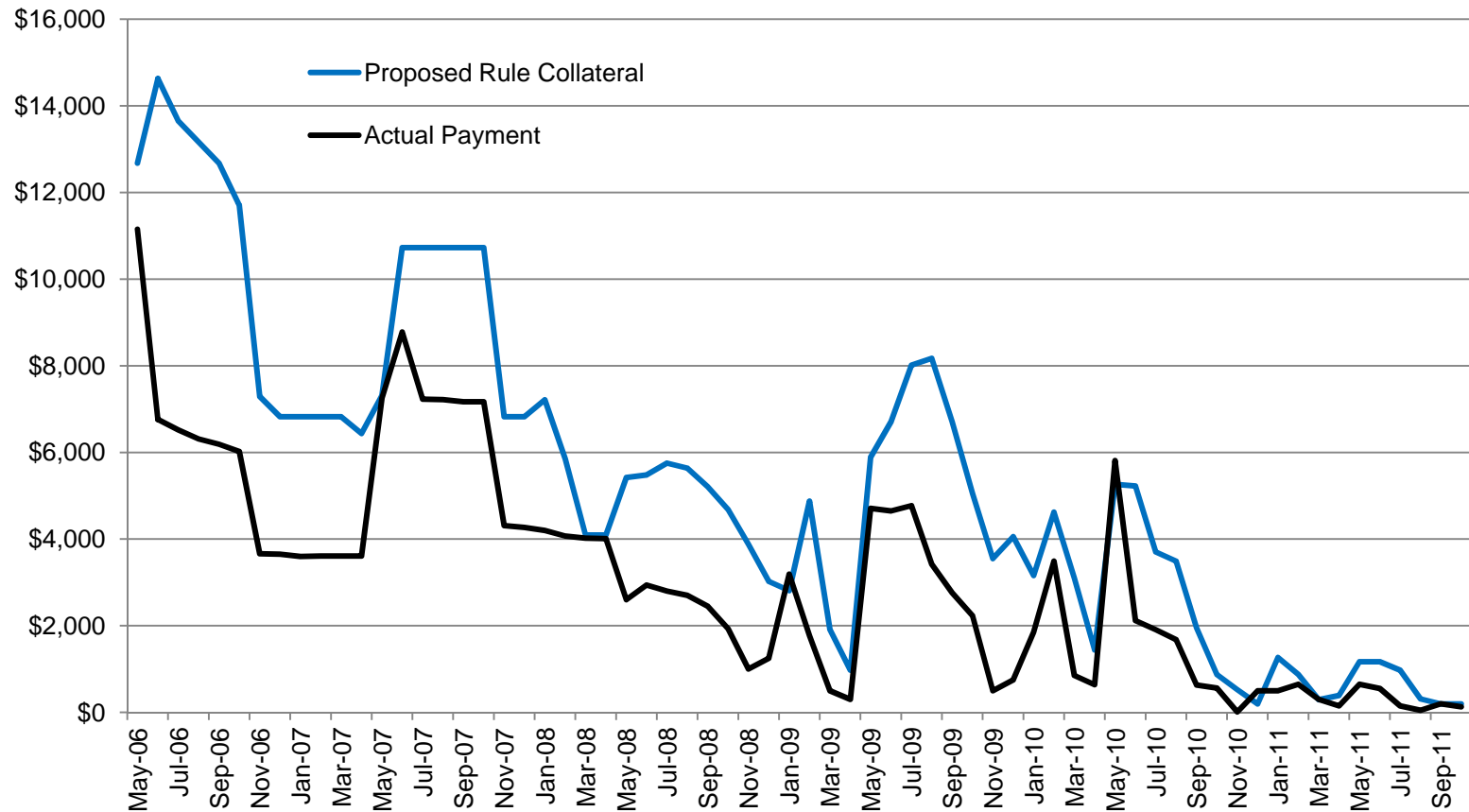
ICAP Spot Market Exposure: Analysis – Zone K Margin

- ◆ Adding a margin of 95% to the monthly auction price in Zone K identified the following:
 - *Overall uncovered exposure would have approximated 1% from May 2006 through October 2011.*
 - *Collateral requirements would have been reduced by approximately 53% during the same time period.*

Breakdown for one Market Participant buying 1 MW in Zone K

| | May 2006 - Oct 2011 | May 2007 - Oct 2011 | May 2007 - April 2010 | May 2010 - Oct 2011 |
|-------------------------------|------------------------|------------------------|--------------------------|------------------------|
| Collateral Held | \$336,005 | \$216,489 | \$188,409 | \$28,080 |
| Uncovered Payments | \$1,245 | \$1,245 | \$382 | \$863 |
| % Uncovered | 0.6% | 1.0% | 0.3% | 5.2% |
| Excess Collateral Held | \$143,759 | \$88,934 | \$76,541 | \$12,393 |

ICAP Spot Market Exposure: Analysis – Zone K Margin



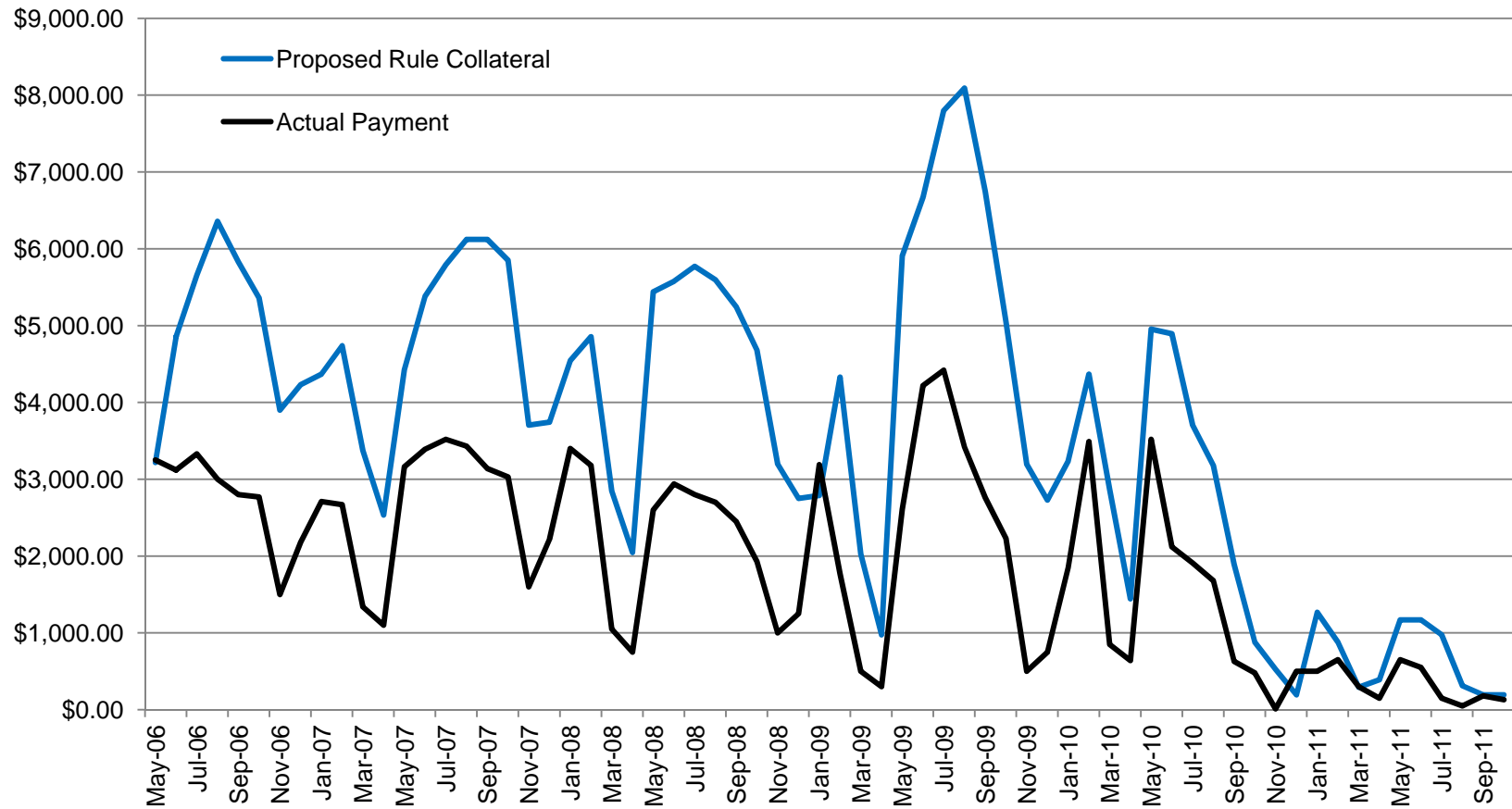
ICAP Spot Market Exposure: Analysis – NYCA Margin

- ◆ Adding a margin of 95% to the monthly auction price in NYCA identified the following:
 - *Overall uncovered exposure would have approximated 1% from May 2006 through October 2011.*
 - *Collateral requirements would have been reduced by approximately 59% during the same time period.*

Breakdown for one Market Participant buying 1 MW in NYCA

| | May 2006 - Oct 2011 | May 2007 - Oct 2011 | May 2007 - April 2010 | May 2010 - Oct 2011 |
|-------------------------------|------------------------|------------------------|--------------------------|------------------------|
| Collateral Held | \$243,419 | \$188,994 | \$161,928 | \$27,066 |
| Uncovered Payments | \$747 | \$714 | \$402 | \$313 |
| % Uncovered | 0.6% | 0.7% | 0.5% | 2.2% |
| Excess Collateral Held | \$117,195 | \$92,508 | \$79,290 | \$13,219 |

ICAP Spot Market Exposure: Analysis - NYCA Margin



ICAP Spot Market Exposure: Recommendation

- ◆ The NYISO recommends using the most recent monthly auction price plus a margin, by location, to determine the bidding requirement for the ICAP Spot Market Auction.
 - *UCAP Based Reference Price has historically required excessive collateral to cover potential market exposure.*
 - *Reduces the bidding requirement significantly while sufficiently covering exposure to the market.*

- ◆ To maximize coverage for potential exposure, margins by location are recommended as follows:
 - *Zone J = 15%*
 - *Zone K = 95%*
 - *NYCA = 95%*

ICAP Spot Market Exposure: Recommendation

- ◆ The bidding requirement would be calculated using the following margin formula:
 - *The sum of all locations where the bidding requirement for each location is calculated as follows:*
 - [Monthly Auction Price + (Margin * Monthly Auction Price)] * 1,000 * Deficient MWs
 - plus
 - $\frac{1}{2}$ [Monthly Auction Price + (Margin * Monthly Auction Price)] * 1,000 * $\frac{1}{2}$ Spot Percent * Requirement MWs
- Where Spot Percent currently equals 18% for Zones J and K and 12% for NYCA*
- ◆ If no monthly auction price exists, the calculation would use the last available monthly price for that location.
 - *Historically has only occurred twice in Zone K*

Next Steps

- ◆ CPWG March 16
- ◆ BIC April 18
- ◆ MC April 25
- ◆ BOD June 2012
- ◆ FERC Filing June/July 2012
- ◆ Implementation October 2012

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