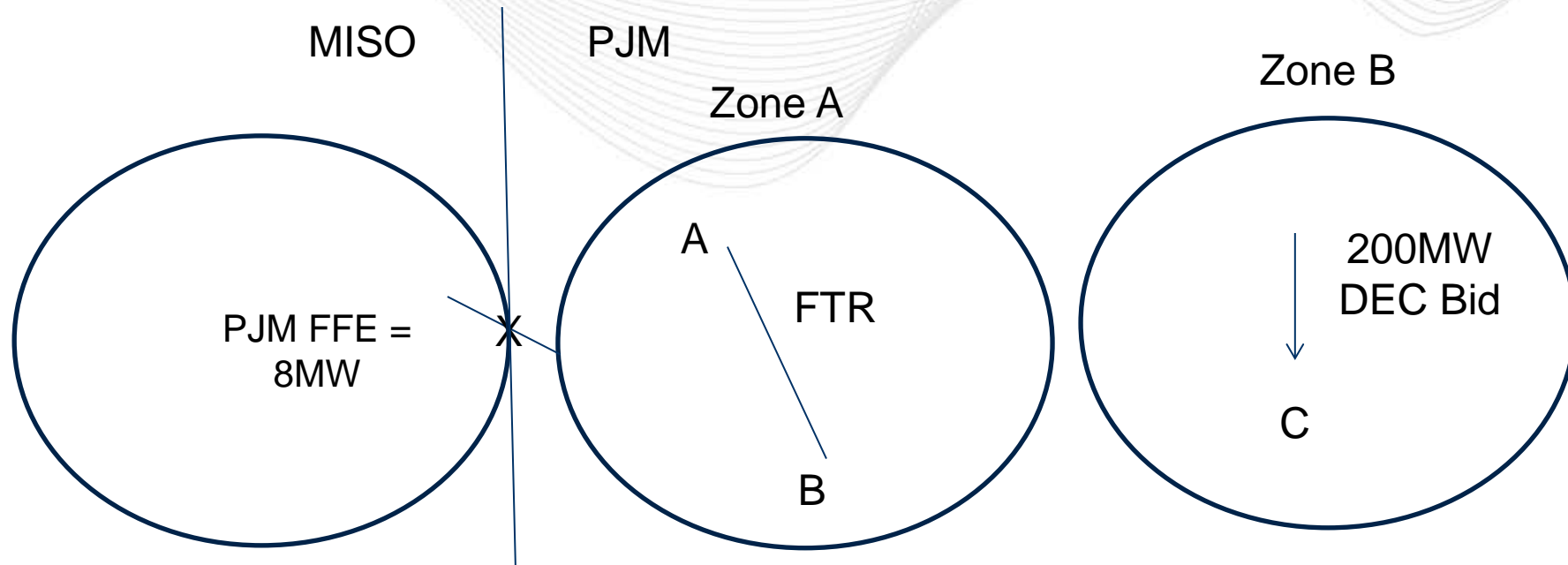




FTR Forfeitures

Brian Chmielewski
Sr. Consultant, Market Simulation
Market Implementation Committee
June 6, 2018



Step 3: Determine if DA Constraint X increases the FTR value from A-B (\$0.01)

Step 1: Determine if FTR Path is more congested DA vs. RT

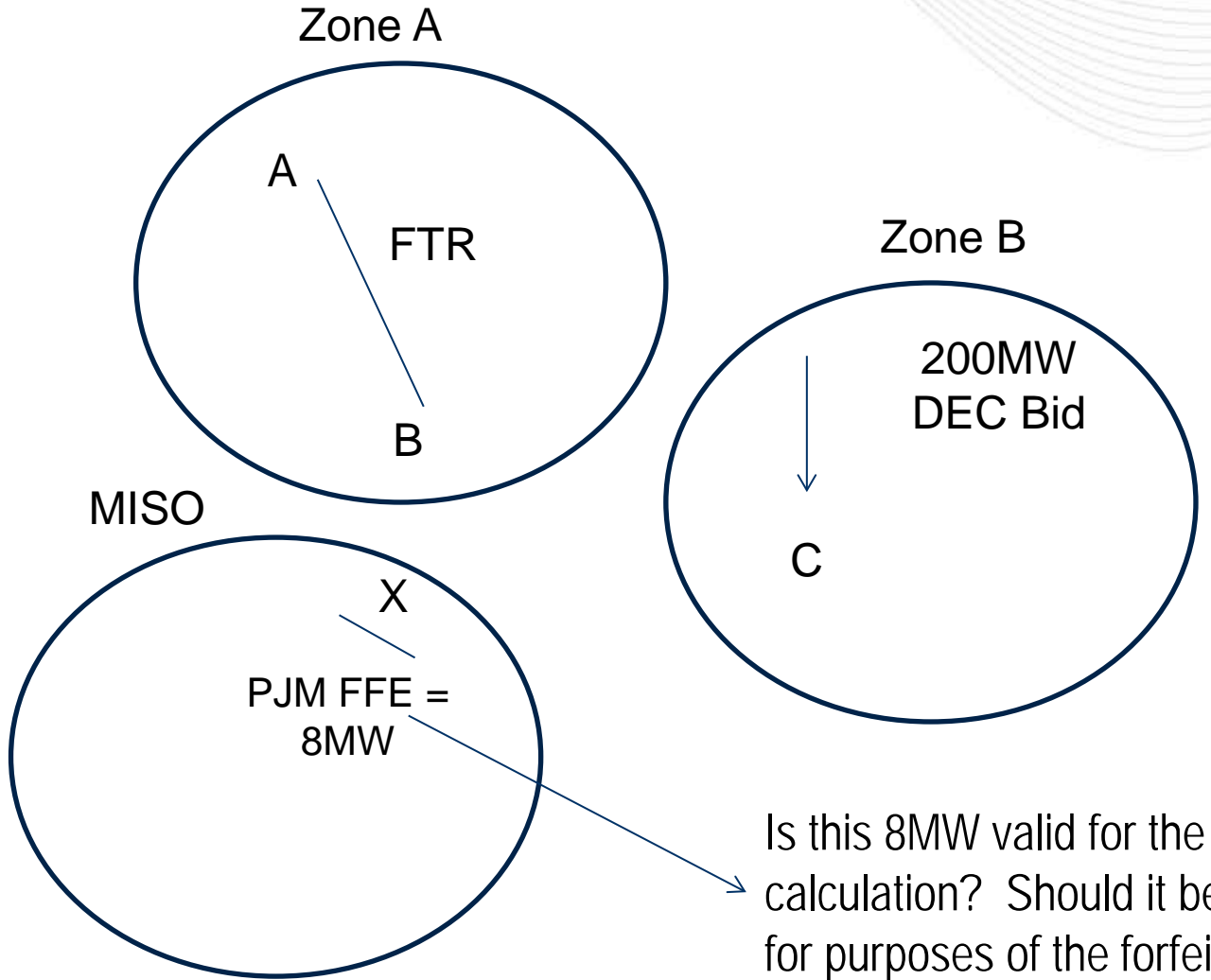
Step 2: Determine impact on DA Constraint X from Virtual transaction (10% of limit)

- Convergence Test – $DA\ cLmp > RT\ cLMP$ for FTR path
 - Determines Hour where DA congestion is greater than RT along a path
- Virtual Test – Net virtual activity across all affiliates must be greater than or equal to 10% of DA constraint limit
 - Determines Constraints virtual flow is significantly impacting
- FTR Impact Test – $(dfax * Shadow\ Price)_{FTR\ Sink} - (dfax * Shadow\ Price)_{FTR\ Source} \geq \0.01
 - Determines FTR paths (direction accounted for counter flow)
- FTR Forfeiture – $DA\ Value - FTR\ Cost$

- KWA #2 – Perform and review sensitivity analysis on the FTR Impact Test levels and others as required
- Sensitivity scenario performed by PJM to adjust FTR Impact trigger from greater than or equal to \$0.01 to greater than or equal to net 10% distribution factor (per prior rule) for September 2017
 - Look at FTR flow impact across identified constraint, not constraint dollar impact to FTR path
- Concept: determine impact this specific trigger is having on forfeiture totals

- Forfeiture dollars reduced by roughly 97% for the month of September 2017
- 67 FTR participants billed forfeitures under status quo
- 18 FTR participants billed forfeitures under sensitivity
- Conclusion: Majority of constraints “far away” from impacted FTRs in September 2017
 - Incomplete: high virtual MW activity can significantly impact from a distance (MW*Dfax)

Test:	Total:	FTR Impact Test:	Virtual Test:	Impacted FTR Accounts
ACTUAL	\$2,001,261.29	Greater than or equal to \$0.01 on FTR TGT Credit	greater of .1 MW or 10% of the line limit	67
SENSITIVITY	\$6,310.08	FTR flows greater than or equal to 10% across constraint	greater of .1 MW or 10% of the line limit	18



- Virtual Test determines if Decrement Bid at point C significantly impacts flow gate X (DA constraint)
- “Significantly” is determined to be greater than or equal to 10% of DA binding limit
- 10% impact for this flow gate would be 0.8MWs or roughly 0.4% dfax given 200MW dec bid

- Continue analysis to look at market-to-market flowgates and better understand DA FFE values
- Present findings at July MIC